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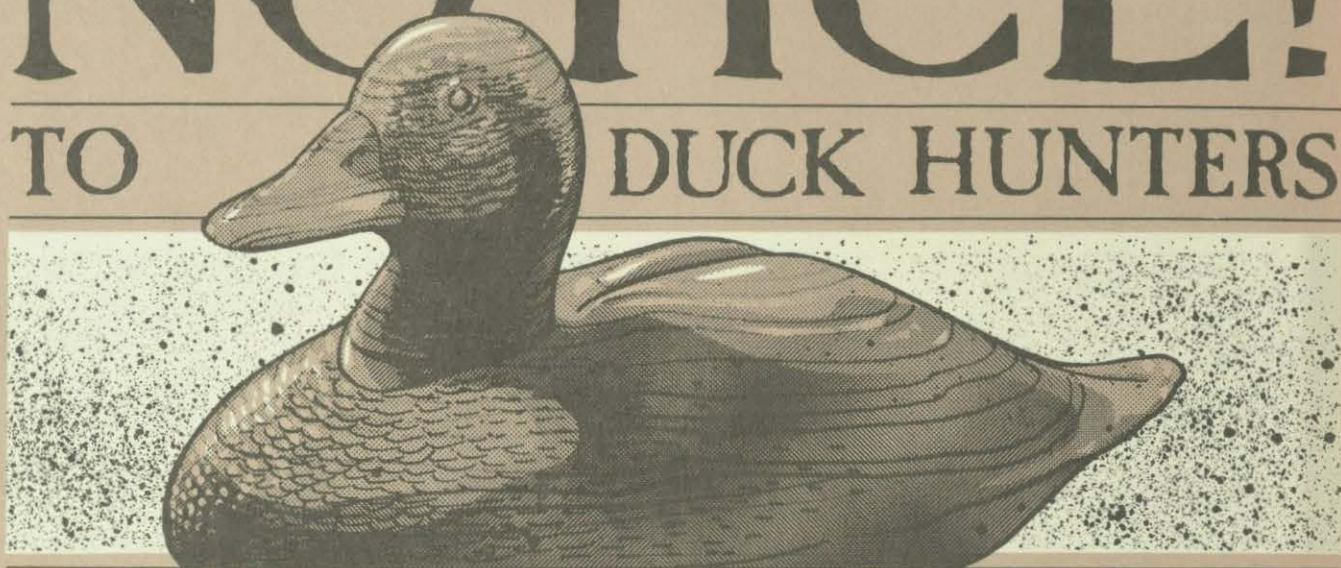
FLORIDA WILDLIFE

September—October 1984

SHELVE IN FLORIDA ROOM

NOTICE!

TO DUCK HUNTERS



1. In Brevard County east of Interstate 95.
2. In Broward, Osceola and Dade counties.
3. In Leon County exclusive of Lake Talquin and the Ochlockonee River.
4. On Lake Miccosukee in Leon and Jefferson counties.
5. On Orange Lake and Lake Lochloosa in Alachua County.
6. On all national wildlife refuges which allow waterfowl hunting.
7. On Lake Okeechobee.
8. On IMC Wildlife Management Area (Polk County).
9. On Occidental Wildlife Management Area (Hamilton County).
10. On Lake Ponte Vedra (north of the Guana Dam) in St. Johns County.
11. On M-K Ranch Public Waterfowl Hunting Area in Gulf County.

**NON-TOXIC STEEL SHOT
MUST BE USED IN ALL
GAUGE SHOTGUNS WHEN
HUNTING DUCKS IN THE
ABOVE AREAS.**

For additional information call
the nearest office of the Game
& Fresh Water Fish Commission



CALL TOLL FREE Lakeland-1/800-282-8002;
Ocala-1/800-342-9620;
Lake City-1/800-342-8105;
West Palm Beach-1/800-432-2046;
Panama City-1/800-342-1676



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FLORIDA WILDLIFE

Dedicated to the appreciation and enjoyment of our wildlife heritage,
and to a fuller understanding of efforts directed toward the protection,
restoration, enhancement and wise use of our natural resources.

Volume 38, No. 3 September-October 1984

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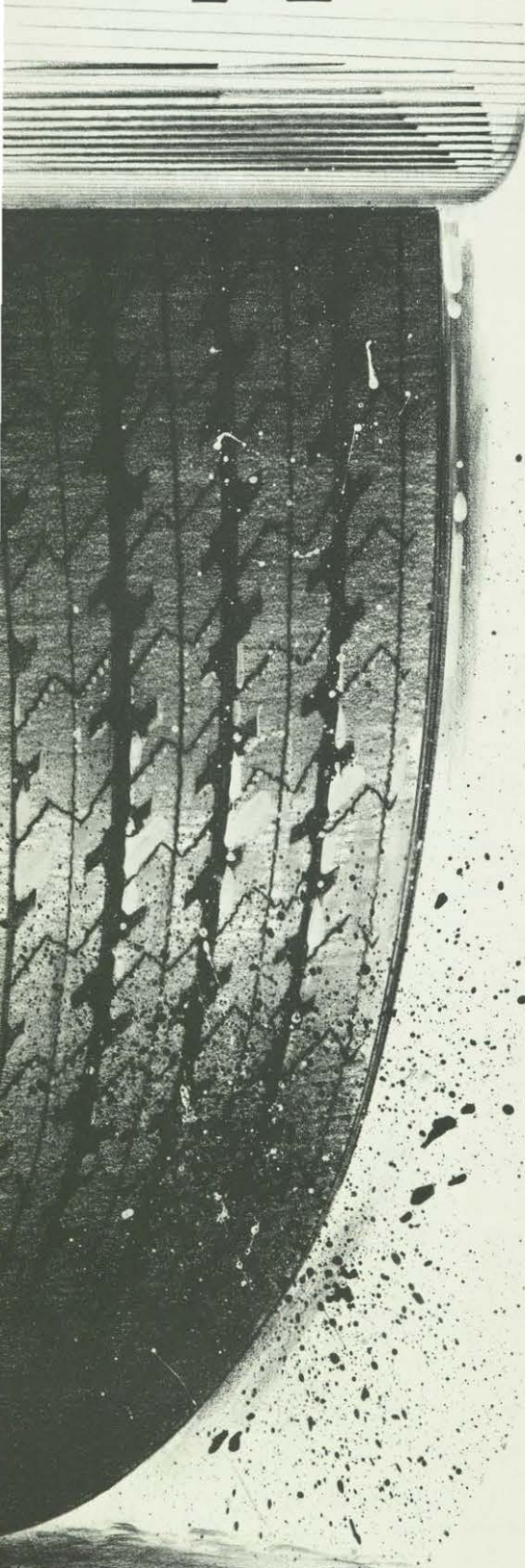
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WOOD SMOKE

Highways Take a Toll

By Biff Lampton



The wild hog died first. Nobody knows why it was three miles from its release site or why it attempted to cross the busy Florida Turnpike that evening, but it had been struck and it died. Within a few hours, the hog had been scattered down the roadway.

The bald eagle was the next road kill. Apparently seeing the hog's remains as an easy meal, it had swooped down and landed. It was picking at the hog's flesh when it too was struck by a fast-moving automobile. Impassively, its mate watched from a perch on a dead pine tree, some 200 yards away.

The bald eagle's carcass was recovered within a couple of hours of its death. As the remains were loaded into a Commission car for shipment to the U.S. Fish and Wildlife Service laboratory in Wisconsin, tourists stopped to photograph its mate, still perched on the pine.

The night before the hog and the eagle died, two black bears met the same fate on Collier County roadways, increasing to five the highway's toll on that species over the previous four months in that county. We also know that a frequent cause of death for the rare, endangered Florida panther is being struck by automobiles.

One Sunday after these observations on the highway, I was returning from a quail hunting trip near Fort Pierce, and I began to think about the hog, the eagle, the bears and the panthers. On impulse, as I drove down the highway, I kept count of the road kills I passed.

I set limitations on my totally unscientific study. The road kills counted had to be identifiable, not so flattened by traffic they could not be recognized; and only the casualties of the southbound lane were noted. As I drove to West Palm Beach, the roadway toll

amounted to 36 wild animals killed. Most were raccoons, opossums and rabbits, but there was also an otter and a bobcat.

Some will say the six quail which were in my game bag were just as dead as the highway kills, just as removed from the wildlife population as the flattened 'coons, but there is a difference. Hunting the quail had some useful function, for in taking the six birds, I had a day's exercise while watching a very fine bird dog do what it was bred to do. I had felt the rush of excitement that always comes when a sportsman walks up to a pointing dog, knowing the covey will burst from cover like tiny brown rockets.

The hunt had been an involvement with nature many can never understand, and the game in my bag would become a very fine meal. Nobody would dare eat the highway's toll; nor could their death be said to have had any useful function.

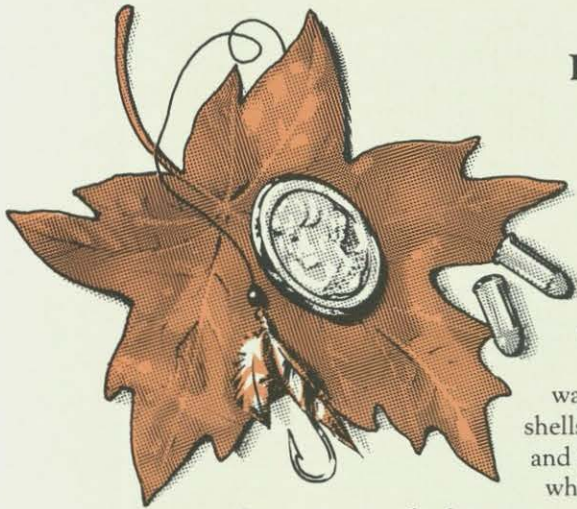
What concerns me is the amount of death meted out daily to Florida's wildlife along our roadways. Those 36 animals I counted were in the southbound lane only. If an equal number had been killed in the northbound lane, 72 would have died along a 50-mile stretch of asphalt that night alone. Since road kills do not last long, a rough tally of that highway's toll for 50 miles would be more than 800 each year, if only that many died each month.

The Florida Turnpike is about 300 miles long. If road kills occur equally along its entire length, the yearly toll would be over a quarter-million wild animals.

Nobody expects anyone to sacrifice an automobile, or possibly a human life, to salvage a mere 'coon in the road, but being aware of the highway toll may save a few animals from death. So drive carefully out there. □

Something of Value

By Dick Dale



As a teenager in Maine, I owned a treasured single-shot .22 rifle. Treasured, because in the days of the Great Depression, any rifle was a genuine luxury, especially a new one. A box of shells lasted all through the season. It cost about 60 cents and each bullet was used in a most miserly fashion, which made being a good shot mandatory.

It was my standard practice to take the gun and four of those bright, shining shells on a five-mile streetcar ride, followed by a two-mile hike to a secret place. When the day was spent, I returned home with four fat squirrels (the legal limit), each of which had a neat, decisive, hole right behind the ear.

The only person who could out shoot me in those days was my mother. She was my mentor. She didn't hunt squirrels, but she could center punch a polished penny at 50 feet. She did this with any rifle you handed her.

My mother isn't with me now, but two things she taught me have been carried through my life. She looked at man as the weakest animal of all, without claw or fang or fierceness. The rifle, she said, gave man the ability to provide for his table, if necessary, and to protect his life and property if threatened.

She also taught me that the forest was basic to man; that, in spite of great cities and marvelous technology, man needs to walk alone in the forest, just as he needs love and understanding.

She obviously knew of what she spoke. Today's mass return to the outdoors is witness to her wisdom, although many of the "returnees" know not what they are seeking. They would do better to leave their noise behind in the city and listen, instead, to the breaking of day.

After more than half a century of living, I have found no need to seek escape in a bottle or a vial of pills. I find satisfaction in the feel of a spinning rod bending in battle with an unwilling bass, or the welcome weight of a special shotgun on a forage into the forest.

My early training in economy remains. I have part of a box of .30-30 cartridges from last season. The same for .22s. Shotgun shells do go a little faster. How else would a "Florida Cracker" gather mistletoe for the holidays?

My total gleanings are not all spiritual, of course. My dear wife and companion has often served lake bass and lemon sauce to visitors. My freezer sometimes provides quail and dove for special occasions.

I assume I must make some kind of point with all of this, so let it then be one of extreme thankfulness for a lifetime of genuine appreciation for field, stream and forest.

My personal concession to which is my rule of always using artificial lures in the waters and to shoot only when the result will be positive and painless. For me, the outdoors is a freedom that has no equal. To be regarded with reverence and respected with every possible act of care—something of value! □

1984-85 HUNTING SEASON INFORMATION

ARCHERY	Season Dates	October 13 through November 11 in the Northwest Region; September 29 through October 28 in the other regions.
	Legal to Take	Deer (except spotted fawn); bear in Baker and Columbia counties only; turkey; squirrel; quail; rabbit; wild hog (where declared legal game).

MUZZLELOADING GUN	Season Dates	November 16 through 18 in the Northwest Region; November 2 through 4 in the other regions.
	Legal to Take	Deer with one or more antlers at least one inch in length visible above the hairline; rabbits; wild hogs (where legal game); squirrel; and quail.

GENERAL GUN SEASON

DEER	Season Dates	November 22 through January 27 in the Northwest Region; November 10 through January 6 in the other regions.
	Bag Limits	Daily - 2; possession limit - 3; no season limit.
	Legal to Take	Deer with one or more antlers at least one inch in length visible above the hairline.

TURKEY	Season Dates	Fall: November 10 through January 6.
	Bag Limits	Daily - 1; season - 2; possession - 2.
	Legal to Take	Either-sex turkeys.

TURKEY	Season Dates	Spring: March 16 through April 21.
	Bag Limits	Daily - 1; season - 2.
	Legal to Take	Bearded turkeys or gobblers.

BLACK BEAR	Season Dates	November 10 through January 6, Baker and Columbia counties only.
	Bag Limits	Daily - 1; season - 1.

BOBWHITE QUAIL	Season Dates	November 10 through March 3.
	Bag Limits	Daily - 12; possession - 24.

RABBIT	Season Dates	Open throughout the year.
	Bag Limits	Daily - 12; possession - 24.

GRAY SQUIRREL	Season Dates	November 10 through March 3.
	Bag Limits	Daily - 12; possession - 24.

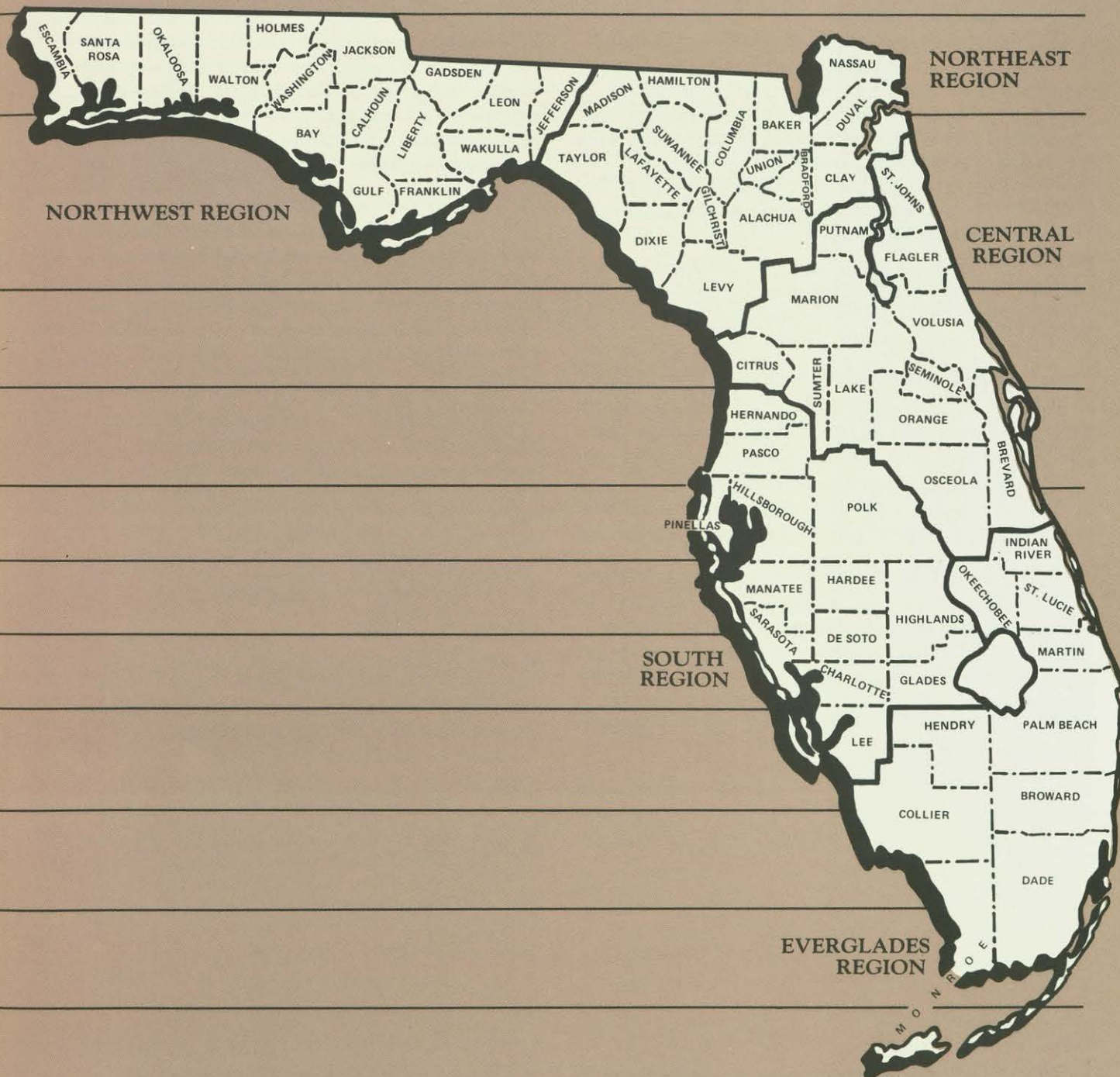
FOX SQUIRREL	Season Dates	November 10 through March 3 (except Lee, Hendry, Palm Beach, Monroe, Collier, Broward and Dade counties).
	Bag Limits	Daily - 2; possession - 4.

WILD HOG	Season Dates	November 10 through January 6 (where declared legal game).
	Bag Limits	Daily - 1; possession - 2.

ARCHERY AND MUZZLELOADING GUN	Season Dates	February 2 through 17 in the Northwest Region.
	Legal to Take	Deer with one or more antlers at least one inch in length visible above the hairline; rabbits; wild hog; squirrel; and quail.

SHOOTING HOURS		One-half hour before sunrise to one-half hour after sunset.
	Spring Turkey	One-half hour before sunrise to 1 p.m.

Consult complete summaries available at county tax collector's offices or
FLORIDA GAME AND FRESH WATER FISH COMMISSION
 offices located in Tallahassee, Panama City, Lake City, Ocala, Gainesville, Miami,
 Pensacola, Ft. Lauderdale, West Palm Beach, Eustis, Lakeland or Defuniak Springs.



WILDLIFE MANAGEMENT AREA

SUMMARY

By
Trisha
Spillan

NORTHWEST REGION

LA FLORESTA PERDIDA—Escambia County. 32,870 acres. Pine/oak woodlands. Both dog and still hunting areas. Deer of either sex legal during the archery and archery/muzzleloading gun hunts. One antlerless deer per day during the archery/muzzleloading gun hunts. Spring turkey hunting on a check-in, check-out system. No camping allowed.

ST. REGIS—Escambia County. 21,038 acres. Short rotation, dense pine stands. Best for deer and quail. Known for its quality deer program. Antlerless deer permits available. Two late-season archery and muzzleloading gun hunts scheduled. No free running dogs allowed. No camping allowed.

BLACKWATER—Santa Rosa and Okaloosa counties. 196,200 acres. Open piney woodlands. Quail and deer are primary game species. In addition to the early quota permit period (required on both the dog and still hunt sections), hunting with dogs is allowed under quota permit January 2 through 13. Spring turkey hunting is popular. Camping permitted at designated campsites.

POINT WASHINGTON—Bay and Walton counties. 160,154 acres. Short rotation, dense pine flatwoods. Swamps and titi creeks provide good wild hog hunting. Deer densities highest in still hunt sections. Use of dogs for hunting wild hogs is prohibited. Intense pressure during spring turkey hunt. Trapping under permit legal January 1 through 27 in still hunt area. Moores Pasture Unit now a separate management unit requiring a separate quota permit this fall. No camping allowed.

EDWARD BALL—Gulf County. 66,270 acres. Flat, pine woodlands and titi swamps. Archery season October 13 through November 4. Area open the first 11 days of general gun hunt, then Thursdays, Fridays, Saturdays and Sundays only. Trapping under permit January 1 through 27 in still hunt area. No camping allowed.

G.U. PARKER—Calhoun and Gulf counties. 20,124 acres. Heavily wooded with river bottom, hardwood swamp and pine flatwoods. Deer densities average one per 25 acres. Body weight and antler size increasing; 1½-year-old bucks were 25 percent heavier last year than previous years. Good squirrel hunting area. Wild hog hunting from November 22 through December 2. No free-running dogs allowed. No camping allowed.

APALACHEE—Jackson County. 5,144 acres. Open fields, longleaf pine timberlands. Excellent quail, some nice deer killed. Early duck hunt should be excellent with area open then on Tuesday, Thursday, Saturday and Sunday with shooting allowed on selected ponds. Antlerless deer permits available. Camping permitted at designated campsites.

APALACHICOLA—Leon, Franklin, Wakulla and Liberty counties. 558,380 acres. Pine flatwoods with an abundance of creek and swamplands. Scattered, dense titi stands are home to black bear, deer, wild hog and turkey. October bear hunt under special permit only. Five-day muzzleloading gun hunt set for November 16 through 21. Camping permitted at designated campsites.

ROBERT BRENT—Liberty and Gadsden counties. 80,700 acres. Pine/turkey oak woodlands with hardwood swamps and branch heads. Recently popular with many hunters. Primary species are deer, wild hogs, turkey and squirrel. Healthy wild turkey population makes this area popular during spring turkey hunts. Trapping legal January 1 through 27 under permit in the still hunt area. No camping allowed.

JOE BUDD—Gadsden County. 6,300 acres. Mixture of agricultural fields and oak/pine woodlands. High deer density and open to archery and muzzleloading enthusiasts. Area divided into six zones with limited hunter quota. Dove and small game hunting on Wednesdays. Spring turkey hunting by archery or muzzleloading guns on specific days. No camping.

TALQUIN—Leon County. 3,000 acres. Mixed pine/oak uplands. Open to archers and modern weapons November 23 through January 27 on Fridays, Saturdays and Sundays only. Three-day either sex deer hunting in January. There will also be small game and spring turkey hunts. No camping.

OCHLOCKONEE RIVER—Leon County. 2,845 acres. Pine stands, cut over hardwoods and swamplands. Deer and squirrel hunting good along swamp bottomlands. Open only for general hunt on Fridays, Saturdays and Sundays. Three-day either sex deer hunt in January. Spring turkey season will also be limited to the weekends. No camping.

Hunting on Florida's wildlife management areas is a long standing tradition among sportsmen. Each year, thousands of hunters take advantage of the wide variety of habitats and game species which characterize these public areas.

There is game for every sportsman, from white-tailed deer to wild hogs and raccoons. In addition, with more than five million acres available, Florida sportsmen have

perhaps the highest acreage open to public hunting of any state in the country.

What follows is a synopsis of each area to give you a better idea of what to expect this hunting season. For complete regulations and free maps of the areas, contact your nearest Game and Fresh Water Fish Commission office (see page 48).

NORTHEAST REGION

AUCILLA—Wakulla, Jefferson and Taylor counties. 180,048 acres. Tidal marsh, hardwood hammocks and planted pines. Outstanding deer, wild hog and small game hunting. Wild hog hunting restricted to the first 23 days of general gun hunt and archery hunt. Archery hunt only in Taylor County portion of management area and is restricted to deer with one or more antlers at least one inch in length. No camping.

CAMP BLANDING—Clay County. 70,000 acres. Oak ridges, creek bottom hardwoods and planted pines. Deer and small game hunting excellent. Still and dog hunting allowed. All pre-season hunts are limited by quota. No camping.

CEDAR KEY SCRUB—Levy County. 4,000 acres. All hunting is by special quota hunt permit. Deer hunting fair. Wild hog hunting excellent. Squirrel is the only other legal game. No camping.

CYPRESS CREEK—Hamilton County. 25,972 acres. Habitat varies from piney flatwoods to hardwood creek bottoms. Deer and squirrel hunting excellent. Archery hunt limited to two weeks and muzzleloader hunt limited to three days. Wild hogs legal only during archery hunt and for the first 23 days of general gun hunt. No camping.

GULF HAMMOCK—Levy County. 30,075 acres. Hardwood hammocks to planted pines. Fair deer and wild hog hunting. Wild hogs legal only during archery and first 23 days of general gun hunt. Squirrel hunting excellent. Camping allowed.

JENA—Dixie County. 60,264 acres. Habitat is planted pine and cypress swamps. Deer hunting fair. Wild hogs will be legal for the first 23 days. This is the first time wild hogs have been legal on this area. Still and dog hunting allowed. No archery or muzzleloader hunts. No camping.

LAKE BUTLER—Baker, Columbia and Union counties. 117,615 acres. Primarily planted pines with limited creek bottom hardwoods in still hunt area. Deer hunting fair with best deer hunting in still hunt area. Hogs may not be taken during the 1984-85 hunts. No archery or muzzleloader hunts. No camping.

LOCHLOOSA—Alachua County. 31,005 acres. Planted pines, oak ridges and oak hammocks. Deer hunting fair in still hunt area. Wild hog hunting good.

Excellent small game area. Wild hogs legal during the first 23 days of general gun hunt and during archery and muzzleloader hunts. No camping.

NASSAU—Nassau County. 62,118 acres. Planted pines and river bottom hardwoods around creeks and St. Marys River. Deer good and wild hogs fair. Wild hogs legal during archery and muzzleloader hunts and during the first 23 days of general gun hunt. Squirrels excellent in still hunt area. Camping permitted.

OCCIDENTAL—Hamilton County. 3,000 acres. Managed for waterfowl. Excellent duck hunting for both diving and puddle ducks. Hunting on Wednesdays and Saturdays only during established waterfowl season. Hunters must check in and out. No camping.

OSCEOLA—Baker and Columbia counties. 157,232 acres. Habitat varies between planted pines and cypress swamps. Special bear hunt during October and bear is legal during muzzleloader and general gun hunts in the still hunt area. Deer hunting good. Wild hog hunting fair. Small game poor. Camping permitted.

PERPETUAL—Dixie County. 71,895 acres. Dog and still hunting allowed. Deer hunting is fair. Wild hog hunting legal. Small game excellent along the Suwannee River. No archery or muzzleloader hunts. Camping permitted.

RAIFORD—Bradford and Union counties. 9,000 acres. Planted pines and cypress ponds. Primitive weapons only. Only 3,000 acres huntable, remaining land is closed. Fair deer hunting and poor wild hog hunting. Archery and pre-season muzzleloader hunts available. No rimfire or centerfire guns. No camping.

STEINHATCHEE—Dixie and Lafayette counties. 158,024 acres. Habitat consists of planted pines and cypress swamps. Very few hardwood stands. Deer hunting with dogs allowed throughout the area. Deer hunting good. Wild hog hunting good and allowed during archery hunt and first 23 days of general gun hunt. Camping permitted.

TIDE SWAMP—Taylor County. 20,488 acres. Coastal marsh, hardwoods and planted pines. Deer hunting good. Only still hunting allowed. Wild hog hunting allowed during archery hunt and first 23 days of general gun hunt. Squirrel hunting excellent in hardwood hammocks. No camping. ▷

CENTRAL REGION

BULL CREEK—Osceola County. 22,000 acres. Pine/palmetto flatwoods, scattered bayheads and cypress swamps. Special archery and muzzleloader hunts and spring turkey hunt planned. Antlerless deer permits to be available. Wild hogs and deer plentiful. Quail hunting should be good. All game must be checked at check stations. Camping permitted at designated campsites only.

CITRUS—Citrus County. 41,000 acres. Rolling sand hills with open stands of longleaf pine and turkey oak. Deer population very good. Quail and squirrel populations are fair. Bird dogs only permitted during small game hunt. Camping permitted at designated campsites.

FARMTON—Volusia and Brevard counties. 52,000 acres. Dense pine/palmetto flatwoods, cypress heads and creek swamps. No archery or muzzleloader hunts. Area closed on Wednesdays and Thursdays except during first nine days and on Thanksgiving Day. Deer population good and wild hog hunting fair. Hunting with dogs restricted to specific area. Centerfire rifles prohibited. Camping permitted at designated campsites.

FORT McCOY—Marion County. 15,000 acres. Scattered clear cuts, pine/palmetto flatwoods, cypress ponds and creek bottom hardwood communities. Special hunts scheduled. Deer, wild hog, small game and turkey populations are fair. Camping permitted at designated campsites.

GEORGIA-PACIFIC—Putnam County. 11,000 acres. Creek bottom hardwoods and pine/palmetto flatwoods. No muzzleloader hunt. Deer and wild hog populations rated good. Camping, centerfire rifles and dogs prohibited.

JUMPER CREEK—Sumter County. 10,000 acres. River swamps, hardwood bottoms interspersed with scattered oak/cabbage palm hammocks. Special applications needed for spring turkey hunting. Wild hog, turkey and small game populations are good. Deer populations are low. Camping is prohibited.

OCALA—Marion, Lake and Putnam counties. 382,000 acres. Ranges from dense scrub oak/sand pine communities to wet and dry prairies to longleaf pine/turkey oak communities to scattered clear cuts and pine/palmetto flatwoods. Archery, general gun and small game hunts. Dog hunt quota permit needed throughout entire general gun hunt. Hogs considered trespass livestock. Deer population fair to good in still hunt and low in dog hunt areas. Limit one per day, two per season. Dove hunting allowed during first phase. Camping according to U.S. Forest Service regulations.

RELAY—Flagler County. 25,000 acres. Pine/palmetto flatwoods, creek bottom hardwood communities, scattered hammocks and cypress heads. Archery, muzzleloader, general gun and spring turkey hunts set. Hunters must check in and out at check stations. Deer

populations good. Hogs are not legal game. Camping permitted at designated campsite with permit from Georgia-Pacific Corp.

RICHLOAM—Sumter, Pasco, Hernando and Lake counties. 56,000 acres. Dense pine/palmetto flatwoods with scattered oak hammocks, creek bottom hardwood communities and cypress ponds. Archery, general gun and spring turkey hunts set. Deer, wild hog and turkey populations are good. Camping at designated campsites during general gun hunt and other areas during archery and spring turkey hunts.

ROCK SPRINGS RUN—Orange County. 9,000 acres. New area. Pine/palmetto flatwoods, scrub oak/sand pine communities, hardwood hammocks and creek swamps. Only deer and wild hog legal to take. Deer population very good and wild hog population fair. Handguns and pistols prohibited. No bag or size limit on wild hogs. Camping prohibited.

SALT SPRINGS—Marion County. 10,000 acres. Pine/palmetto flatwoods, creek bottom hardwood communities, scattered hammocks and dense scrub oak/sand pine communities. Four archery, four muzzleloader and four general gun hunts scheduled. Deer and squirrel populations very good. No size limit on wild hogs. Camping permitted at campsite or in Ocala National Forest, according to U.S. Forest Service regulations.

SEMINOLE RANCH—Orange County. 6,000 acres. River marsh, open pasture land, hardwood hammocks, cabbage palm hammocks. Quota of antlered and antlerless deer. Spring turkey, archery, muzzleloader gun and general gun hunts set. Restrictions on bag limits. Deer and wild hog populations good and turkey populations fair. Squirrel population good. No camping.

THREE LAKES—Osceola County. 43,000 acres. Open pine/palmetto flatwoods with some scattered cypress heads and small oak hammocks. Antlerless deer permits available for muzzleloading gun and general gun hunts. Small game and spring turkey hunts set. Deer and wild hog populations are good; small game and turkey populations fair. Camping permitted at designated campsites.

TOMOKA—Volusia County. 6,700 acres. Cypress swamp interspersed with pine/palmetto flatwoods. Archery, muzzleloading gun and general gun hunts set. Good deer and wild hog populations. Wild hog hunting during general gun hunt limited to November 10 through 18. Camping is prohibited.

TOSOHATCHEE—Orange County. 28,000 acres. Pine/palmetto flatwoods, oak hammocks, creek swamps with hardwood bottoms and extensive river marsh. No bag limit on wild hog. Quota of either sex deer. Deer and wild hog populations are very good. No turkey or small game hunts. Camping is prohibited.

SOUTH REGION

IMC—Polk County. 320 acres. Managed exclusively for waterfowl. Open Thursday and Saturday during the early duck season and Tuesdays, Thursdays and Saturdays during duck and coot season. Camping prohibited.

GREEN SWAMP—Polk, Sumter and Lake counties. 37,000 acres. Flatwoods, pines and palmettos interspersed with cypress ponds. Typical Florida river swamp along the Withlacoochee River. Fair chance for deer and wild hog. Most productive for turkey along oak hammocks and river swamps. Good for squirrels there, too. Camping permitted at designated campsites.

CROOM—Sumter County. 21,500 acres. Longleaf pine/turkey oak uplands. Some river swamp. Deer population up and bucks sporting good racks. Best area is on the Sumter County side, north side of Trail 6 on the Hernando County side. Excellent for squirrel. No hog or turkey hunting. Good quail. Camping permitted at designated campsites.

CECIL M. WEBB—Charlotte County. 65,343 acres. Coastal flatwoods with scattered freshwater sloughs and palmetto prairie. A few oak hammocks. Quail population up after two poor years. Deer hunting fair. Only 40 wild hogs may be taken. No turkey hunting. Dove hunting during general gun hunt. Camping at designated campsites.



LYKES BROS. FISHEATING CREEK—Glades County. 33,300 acres. Creek swamps, flatwoods, planted pines, oak scrub and freshwater sloughs. Hunting should be as good as last year. Deer and wild hog should be best first two weeks. Gray and fox squirrel hunting should be very good. Snipe hunting excellent in Rainey Slough. Camping permitted at designated campsites.

RAINEY SLOUGH—Glades County. 19,729 acres. Flatwoods with planted pines, freshwater sloughs and creek swamps. Not many deer. Hunting for most species should be only fair. Turkey best along Rainey Slough. Camping permitted at designated campsites.

UPPER HILLSBOROUGH—Pasco and Polk counties. 5,178 acres. Flatwoods with some river swamp. Oak hammocks scattered throughout. Quality hunt expected due to limited quota. Black powder and archery only. Excellent squirrel, good wild hog, limited quail. No turkey hunting. Camping permitted at designated campsites.

EVERGLADES REGION

ROTENBERGER—Palm Beach County. 23,970 acres. Sawgrass wetlands, some brush. Harvest anticipated to match last year's. Hunting under permit only by muzzleloaders, vehicle users and walk hunters; no special permit needed for archers. Will be open for duck and snipe. Camping permitted.

HOLEYLAND—Palm Beach County. 35,350 acres. Brush, overgrown sawgrass with some wetland. Deer and wild hog to be about the same as 1983. Some snipe. Special permits required. Will be open for early duck season. Camping permitted.

EVERGLADES—Dade, Broward, and Palm Beach counties. 724,560 acres. Sawgrass wetlands dotted with tree islands. Deer herd recovering from 1982 die off. Area II closed for hogs and deer but open for ducks. Permit restrictions. Open for early duck season. Camping permitted.

BROWNS FARM—Palm Beach County. 4,460 acres. Brushy, overgrown muckland. Deer and wild hog populations look good. Open for archery, muzzleloading and general gun hunts. No special permits. Camping permitted.

BIG CYPRESS—Collier and Monroe counties. 564,320 acres. Tracts of stunted cypress, hardwoods, palmetto/piney flatwoods, sawgrass and more. Deer herd steady, wild hogs available. New off-road vehicle permit required for all ORVs used for fishing, hunting and frogging. Quota on Bear Island Unit; no raccoon hunts there. Dog training season shortened. Fall gobbler hunting at Monument and Loop Road units. Camping permitted throughout year.

J.W. CORBETT—Palm Beach County. 57,892 acres. Piney flatwoods with mixed hardwoods and cypress. Very popular with fishermen. Deer and wild hog hunting equal to last year's with a one-hog bag limit. Drier conditions may improve quail hunting this year. Camping permitted. □



When Bass Won't Bite,

Frank Ruiz-Photograph



Try CREEK FISHING

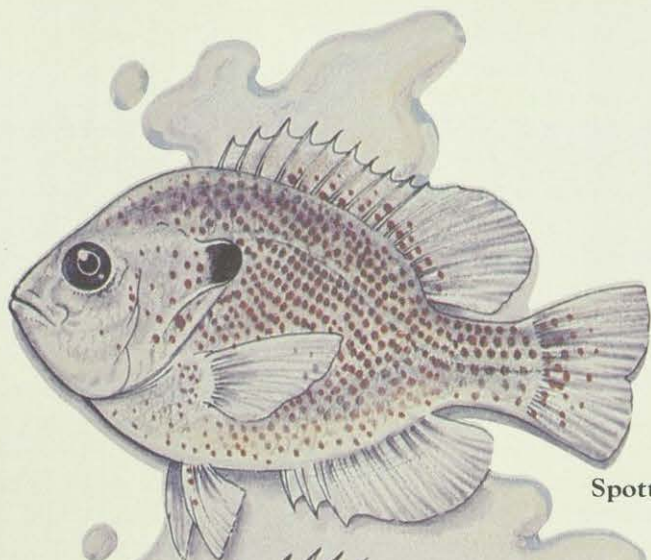
By Frank Ruiz

There is a fish in Florida, that, for want of a better name, is called the warmouth.

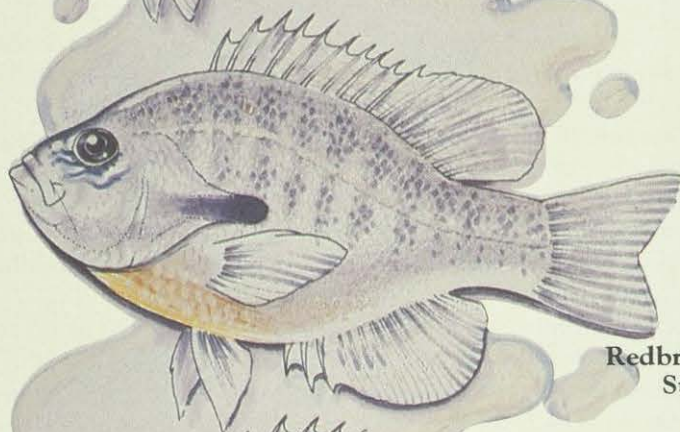
Known as "goggle-eye" or "goggle-eyed perch" in other Southern states, this fish is about as close to a largemouth bass as any panfish is going to get. With its habit of hanging around or knocking around cypress stumps and other shoreline decoration, the warmouth is sometimes confused with stumpknockers (spotted sunfish).

However, the warmouth is not a stumpknocker, nor is it a redbreast. Neither is a warmouth a bluegill. What all these common fishes are together is a group of wonderful little panfish that I like to call "stumpknockers and other creek fish."

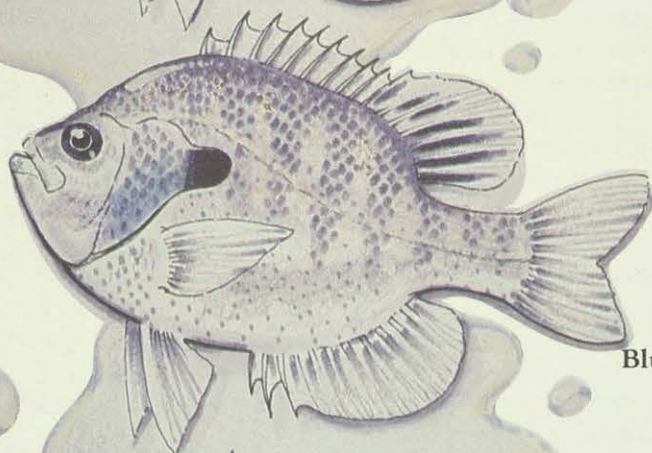
It doesn't matter whether you call the fish you catch in one of



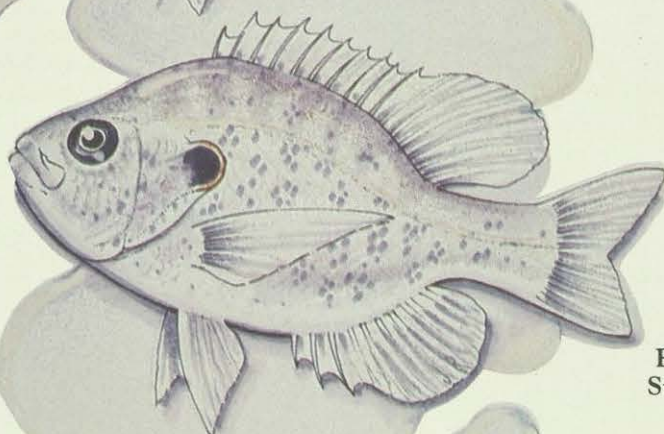
Spotted Sunfish



Redbreasted Sunfish



Bluegill



Redear Sunfish

Florida's hundreds of fishing creeks a warmouth or a stumpknocker. As a group, they are just perfect for those days when you find yourself with all your tackle cleaned, but the bass aren't biting. They seem to be especially made for those languid days between winter and spring, when the chill is still in the air and there is nothing better than a day along a creek.

Personally, I like the name warmouth instead of goggle-eye. It sounds mean, like piranha. You can thumb a warmouth, but you can't thumb a stumpknocker—unless you have very tiny fingers. The mouth of the warmouth is much larger than those of other panfish.

One pleasing trait of warmouths is that they are fairly tasty fish. They also appear to have a voracious appetite, particularly during the morning and early evening hours. Even during those times when other fish are sometimes hard to find, stumpknockers, warmouths and other creek fish are often cooperative. They aren't pushovers, but they can save an otherwise catchless day.

Some days, you may not want to be out on an open lake dipping live minnows for speckled perch bait, or perhaps you don't have a boat to get to the middle of the lake, whether you want to be there or not.

It could be you've run out of plastic worms, or the price of live shiners (about \$8 a dozen) catches you a little short of cash. These are just a few alibis to go creek fishing, but it could be you just want to go out and try your hand at loading up a nice stringer of panfish in preparation for a serious fish fry. Whatever your excuse, warmouths, stumpknockers and other creek fish can provide you with plenty of action.

Good-sized flowing creeks are the best locations. The fish are apt to be tastier there and you are less likely to run into populations of stunted panfish that aren't worth your trouble. Of all habitats, freshwater creeks are probably the best in terms of catching a lot of fish, fast. Creeks also are nearly always scenic. So, you not only find plenty of ▷

panfish, but you also get to see a lot of nature. There is no telling what native (or exotic) wildlife you may encounter on a jaunt down one of Florida's innumerable creeks.

Fish feed heavily on whatever is abundant in their habitat. If you're up a creek, think about it. Crayfish, small minnows, lots of freshwater shrimp, bugs, dragonflies—those are some of the abundant food animals that stumpknockers, warmouths and other creek fish thrive on.

However, a can of worms and a container of live crickets will catch a lot of fish. Live bait is by far the most successful way to catch creek fish. Using live worms, anglers can often count on getting a good mix of bluegills, shellcrackers, catfish—even an occasional speckled perch—along with the hefty string of stumpknockers, warmouths and other creek fish.

Florida has some very good fishing creeks. Arbuckle Creek, considered by many experts to be among the top 10 bass fishing creeks, is not far from my home. It is not just a good bass creek, but an excellent panfishing haven as well.

Some creeks are better than others. Arbuckle Creek in Highlands County and Shingle Creek in Osceola and Orange counties are two good ones. You can find others on local maps.

One way to find creeks, lakes and other fishing areas is to order county maps from the Department of Transportation, Map and Publication Sales, Mail Station 12, Room 27, 605 Suwannee Street, Tallahassee, FL 32301. The maps are inexpensive—only 30 cents a

sheet. Thirteen of the state's 67 counties have two sheets and Monroe County uses three sheets.

In late winter and early spring, Arbuckle Creek becomes one more quick, quiet place to angle for creek fish with a fly rod, small light spinning outfits or a simple cane pole. Canoes and johnboats help get you up the creek.

A good rule of thumb is that early and late hours catch the most fish; however, creek fishing is anytime fishing. Fish the weedy areas in moderately deep water. At Arbuckle Creek, many areas quickly drop off because of the moderate rate of flow. Along any creek, places like that are excellent fishing areas. Look for areas where stumps, weeds and other debris collect. These spots will contain fish more often than not, including bluegills and shellcrackers.

At times, when I'm fishing a flowing creek, I cast a second line to the middle. This is my way of fishing for catfish. It works! In creeks such as Arbuckle, patient anglers can get a good stringer of channel catfish by baiting with live worms or chunks of bait fish.

You'll recognize a warmouth when you catch one. It has a thick body, much thicker than a bluegill or other panfish. Its eyes are large and they seem to stick out of its head—"goggle-eyes." The warmouth reaches about 11 inches maximum total length, but usually they are not much longer than a bluegill, only fatter.

Lures used with light outfits can be a challenging way to fish for creek fish. Flies aside, you'll have to do some thinking to come up with good lures to work into the areas most likely to hold these fish. You can expect to lose a few. Most of these fish (with exception of the shellcracker) are like snook in salt water; they get into deep cover to feed. If you don't get hung up now and then, you're probably not fishing close enough to the cover.

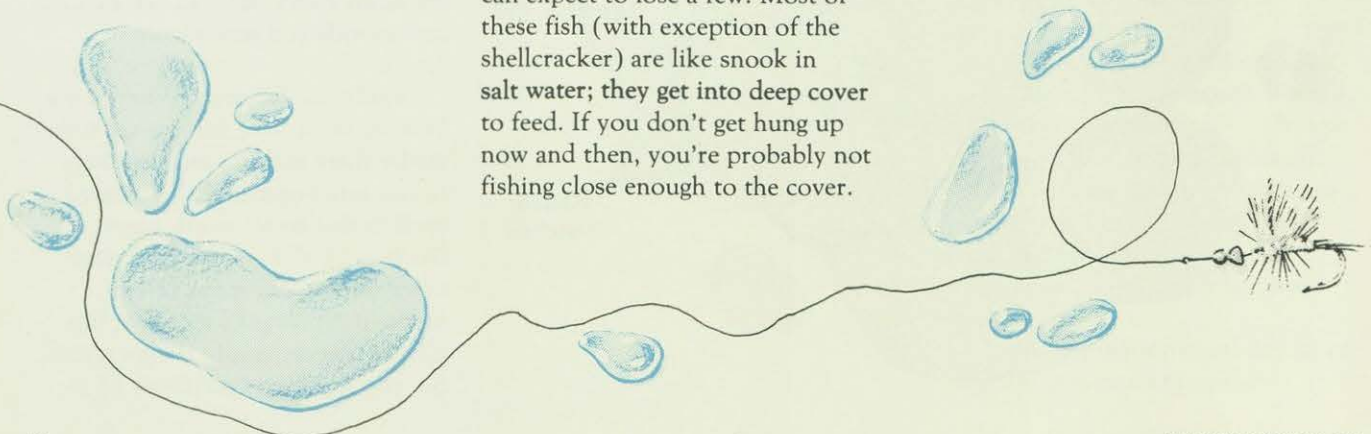
One of the best lures I've tried is a small, squirrel-hair jig called the Bream Killer. This ¼-ounce lure sometimes catches almost any of the creek fish, and small bass hit it too. You can also use ⅛-ounce Bream Killers, the smaller sized Beetle Spins and some miniature versions of lead head "grub" lures. Many other small jigs and lures will also catch creek fish.

To fly fishermen, I'd recommend the Frog Spot or Bumble Bee poppers, but when fishing is really good on the creeks, any number of lures and flies will catch fish.

If you're up to real challenges, **don't buy any bait but, instead, find your own along the creek.** For starters, you can catch live freshwater shrimp with cupped hands, if you avoid sudden movements. Or you can grab a handful of water plants, such as hydrilla, and shake the shrimp out over the shore.

In search of shrimp, you'll probably run across another member of the crustacean family, the crayfish. The shoreline weeds are full of them. Choose the small- to medium-sized ones. Larger crayfish are good catfish bait. You should declaw crayfish as you catch them. This prevents pinched fingers and also keeps them from hanging onto things down on the bottom while you're fishing.

But whether you fish with lures, live bait or flies, angling for warmouths, stumpknockers and other creek fish on one of those bright twilights in midseason is a good way to pick up a lot of action without making a trip to the lake. Why not try it yourself this fall? □



Fishing With a FLORIDA CRACKER

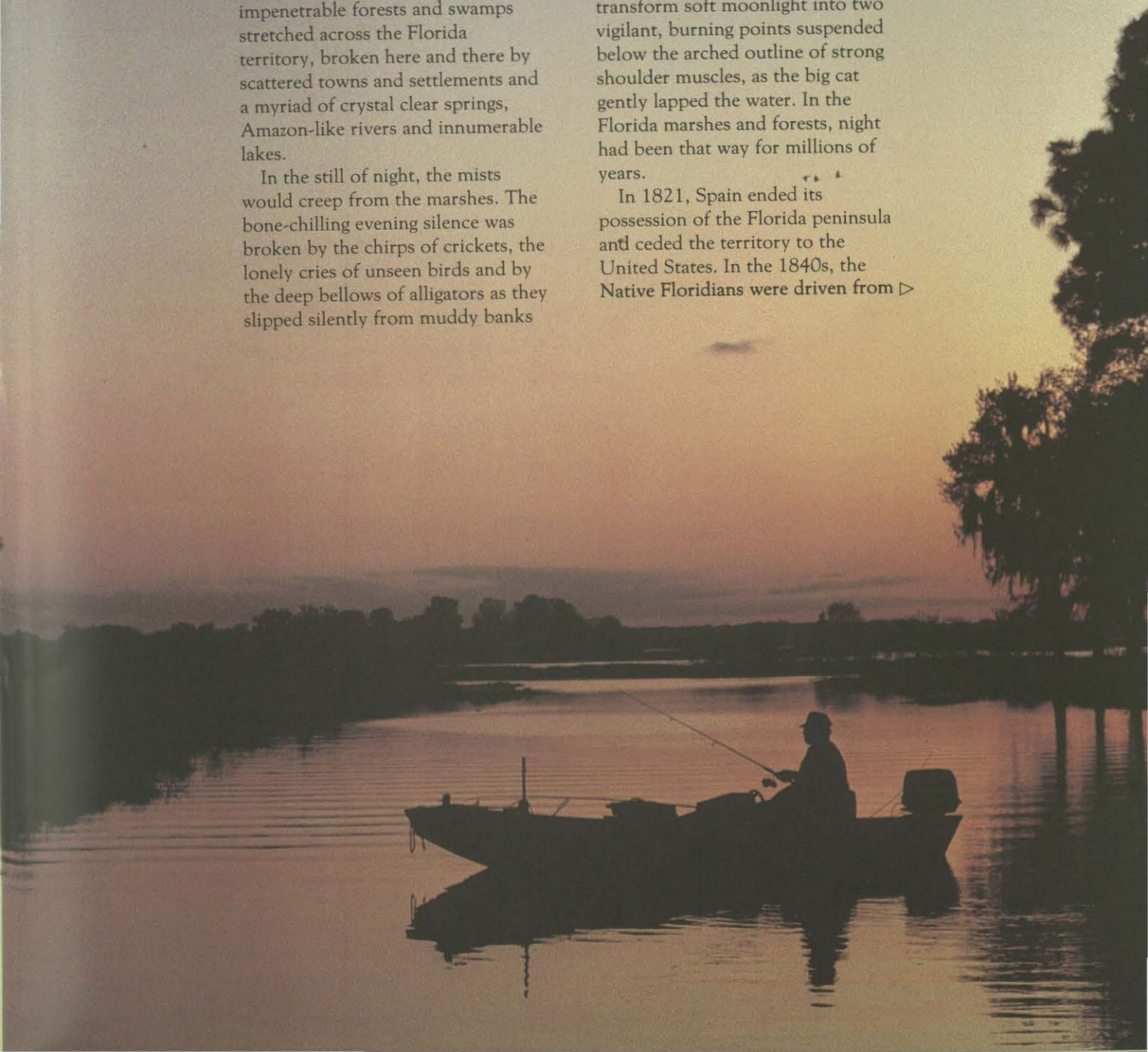
By Thomas Paine Garwood

Little more than 150 years ago, pioneer Florida was barely distinguishable from its primordial state. Thick, lush, nearly impenetrable forests and swamps stretched across the Florida territory, broken here and there by scattered towns and settlements and a myriad of crystal clear springs, Amazon-like rivers and innumerable lakes.

In the still of night, the mists would creep from the marshes. The bone-chilling evening silence was broken by the chirps of crickets, the lonely cries of unseen birds and by the deep bellows of alligators as they slipped silently from muddy banks

into the dark, wet waters in and around which they had survived for millions of years. At the water's edge, a panther's eyes might transform soft moonlight into two vigilant, burning points suspended below the arched outline of strong shoulder muscles, as the big cat gently lapped the water. In the Florida marshes and forests, night had been that way for millions of years.

In 1821, Spain ended its possession of the Florida peninsula and ceded the territory to the United States. In the 1840s, the Native Floridians were driven from ▷



the land, and by the 1850s, a tenacious breed of white settlers were relentlessly beating back the swamps and forests. They began to connect the scarce clearings into farms, orchards and cattle ranches. The early cattle ranchers braved torrential rains, devastating hurricanes, frustrating droughts and marauding insects. The constant cracks of the ranchers' cattle whips gave rise to the nickname "Cracker," which today has come to mean a native Floridian of simple, hardworking, country stock.

It was inevitable in a region containing thousands of miles of shoreline, thousands of lakes and hundreds of streams, that Florida Crackers would nurture a love for fishing that could only have its roots in survival. And so Florida was carved out of the swamps and forests by men and women who were nourished by the fruits of its

rich soil and its once seemingly endless supply of fish.

Today, Florida Crackers still thrive on fishing, but seldom out of necessity. For W. C. "Buster" Cushman, his long fascination with fishing began as a young boy and, oddly enough, not under the most auspicious circumstances.

"My uncle had presented me with my first rod and reel outfit, and I was as proud as could be over it," Buster wistfully recalled one day.

"For days I practiced in my back yard, casting that rod and reel and the single lure that came with it. Then one day, I walked about three miles up to a local lake to spend the afternoon bass fishin'.

"On my very first cast, a big ol' bass grabbed that lure, came out of the water with it and pulled the line

away from its fastening hook. I didn't have any other lures, so I had to walk back three miles, empty-handed and empty-hearted," Buster remembered.

For most of his 75 years, Buster has continued to fish as the world around him experienced wars; the Great Depression; the assassination of a United States President; the nuclear and space ages; and enough economic, medical, and social changes to shake the foundations of nations. But throughout these years, Buster's fishing continued to offer him an opportunity for healthy retreat, repose and communion with nature. "When you're out there fishin'," Buster says, "you just forget about things for a while. There's nothing like it for relaxin'."

Buster's formula for relaxing must be given some credibility, for at age 75 he looks 65—in spite of his weather-beaten face and gnarled, workman's hands. In his work shoes, flannel shirt, cap and baggy pants that look as though they might contain almost any type of fishing odds and ends, he is a classic low-keyed, unpretentious Cracker fisherman.

One typical afternoon, we joined Buster as he was closing the gate on the back section of his property, after tending his garden. As he slowly gathered up the few items he needed for an afternoon on the lake, we asked him what he'd be fishing for. He answered with a twinkle in his eye, "Whatever's bitin'."

After bidding his young wife of 70 goodbye for the afternoon (she often accompanies him), he eased his car down the back country roads and casually asked, again with a twinkle, "Is the boat still following behind?"

With a water jug, a few cane poles, a spinner, some crickets and worms, he stopped at the tackle store on the way and added some live minnows (he calls them "minners") to his supplies.

Buster moved from Orlando to the Gainesville area in 1942, and he says he feels fortunate to have the fishing opportunity the Gainesville area affords. "With either coast not far away, you can fish for



W. C. "Buster" Cushman

red snapper, grouper and the rest," he said, "but right here in the Gainesville area we've got Newnans Lake, Orange Lake, Lochloosa and several other lakes with some of the best bass, bluegill, redear, stumpknocker and redbreast fishin' that you can imagine."

At Newnans Lake, just before he launched his boat, Buster casually reminded us that he needed to put the plug in the boat if we were planning to go very far. Once on the lake and searching for a perfect spot to fish, Buster settled into a relaxed, memory-filled reverie and entertained us with one fish story after another.

From his childhood days, he remembered an old friend who caught his first fish and walked around with it in his hip pocket all day, unable to understand why it died. In another story he told us, "One day I came up on what I thought was an empty boat, only to find this ol' boy a sleepin' with a fishin' line tied to his toe. He told me he was just sleeping until the fish started bitin', then he'd wake up to a tug on his toe to begin fishin' serious like."

Other stories included one about a great catfish that got away. Soon after catching a small catfish on a trotline in a creek one day, Buster and a friend were amazed to see their catch swallowed whole by a much larger catfish. But when they tried to ease in the larger catfish, it would simply open its mouth and release the smaller fish.

One of Buster's favorite stories is about the time he and a friend were horsing around and rocking their boat back and forth in a creek. "Shiners swimming down below got so riled up they began jumping all over and a mess of 'em landed smack in our boat," Buster said, swearing the story was true.

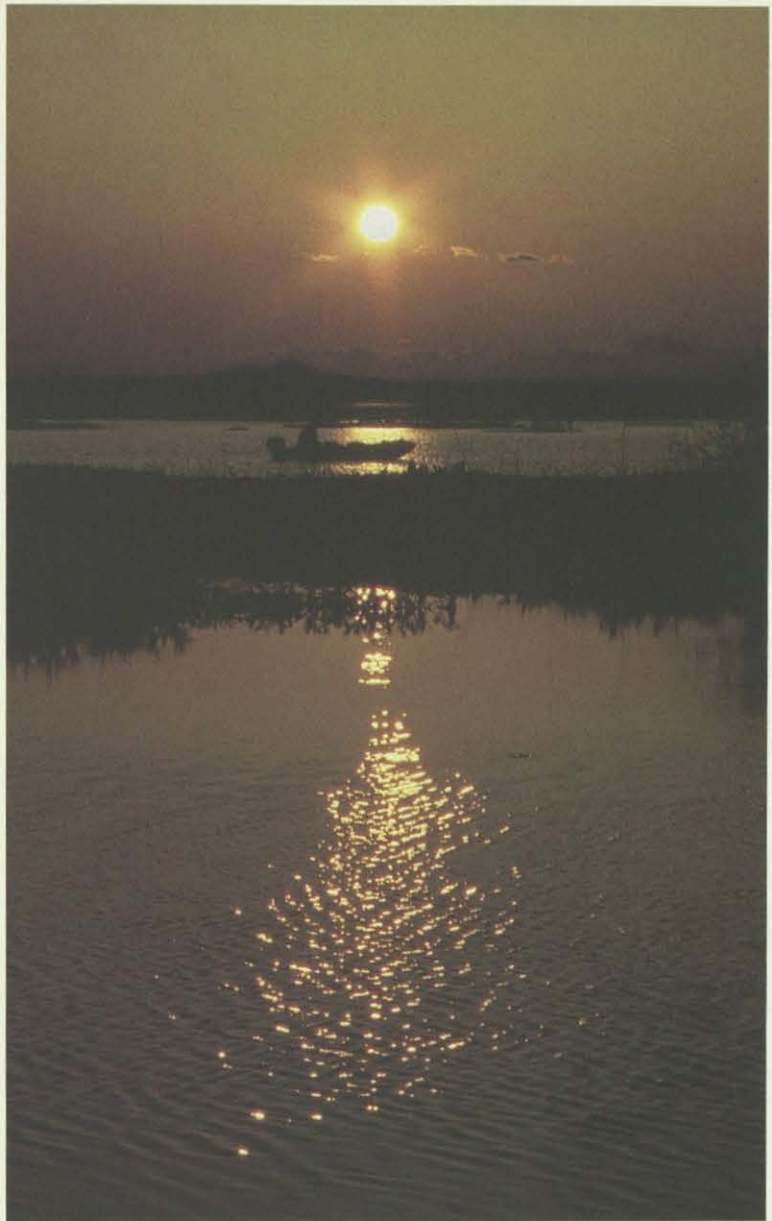
It was difficult for us to comprehend the changes Buster has seen over the years. Married in 1933, he remembered when \$3 bought a full supply of groceries. He recalled when fish were so plentiful that some afternoons you could use up an entire bucketful of bait. "Things sure have changed, but

fishin' is still good—just a mite more difficult is all," Buster said with characteristic aplomb.

In the cool of that late afternoon, Buster carefully guided his boat through the cypress trees into one beautiful fishing pocket after another. With the engine stilled and a light anchor out, the boat drifted ever so gently, sometimes brushing against the cypress trunks and through majestic trails of Spanish moss. The afternoon sun filtered down through the trees as ospreys perched above us, mildly curious about our business. A duck swam lazily by, casually scooted over several logs and continued on again.

As he sat there with a spinner in his hand and several cane poles, Buster's eyes portrayed a Tom Sawyer-like gleam of anticipation. At any moment, he could feel a tiny electric shock travel through him as he received the first, hesitant nibbles from the world just below.

Towards evening, Buster still sat in quiet reverie as the setting sun behind him created a living silhouette portrait of American heritage and of tranquility. As just the faintest shimmer of late light caught his eyes once again, he said, "You know, there's a legend that every day you spend fishin' adds another day to your life." □



Jack Cushman-Photograph

A Quarter-Inch of Direction

Text and Photographs
By John and William Smith



Pathfinding is an essential skill for any serious woodsman. For some, it is acquired slowly; primarily through first-hand experience in the woods. Others have a natural instinct for it.

Pathfinding is knowing where you are and where you want to go. It should be an integral part of your outdoor ventures. To the deer hunter walking in total darkness toward his favorite deer stand, or to the angler hiking before daylight to an isolated pond, its importance is self-evident.

Although I have spent considerable time in the woods, I have been really lost only once. Actually, I wasn't lost—I simply didn't know where I was at the time! But believe me, it is a predicament to be avoided. Even brief disorientation in the woods can lead to frustration. Several years ago I was deer hunting and,

during an afternoon of scouting, I located some promising buck signs—trails, rubs and several fresh scrapes. I selected a tree from which I could survey the area, and attached a portable stand in preparation for the next morning's hunt. Making a mental note of my location, I headed for my truck which was parked beside a logging road a mile away.

Unfortunately, in the following morning's darkness, I became confused as to the precise direction of the preselected site and wasted precious minutes getting on course. Dawn was already breaking when I finally reached my tree stand. I had just begun climbing the chosen tree when movement in a nearby thicket caught my attention. Looking over my shoulder, I stared helplessly at a nice buck, whose curiosity apparently had been aroused by the commotion. He was quietly surveying the situation. Obviously, I was in no position to take action and the buck quickly disappeared. Those few minutes of uncertainty before daylight cost me a chance at possibly bagging that buck.

Shortly after that experience, I learned a little trail blazing technique from the late Troy Caruthers Sr., a friend and avid outdoorsman. What he taught me has proven invaluable for traveling unfamiliar terrain—especially at night. Here is his method:

Red or silver reflective tape (found in most hardware stores) is cut into $\frac{1}{4}$ " squares and a straight pin pushed through the center of each square. These are then pressed into the bark of trees along the line of travel through a wooded area to form a "blaze trail." A square is placed on each side of the trees so the trail is clearly defined in either direction.

In daylight, amid the varied colors of the forest, these small pieces of tape are camouflaged surprisingly well from the casual passerby, yet will still serve to keep the man who placed them on course. In darkness, when pathfinding is most challenging, they really prove their value. In the beam of a good flashlight, they sparkle and shine like tiny beacons. It is comforting to sit in a deer stand until sundown, knowing you will be able to quickly and easily walk back to your car or truck.

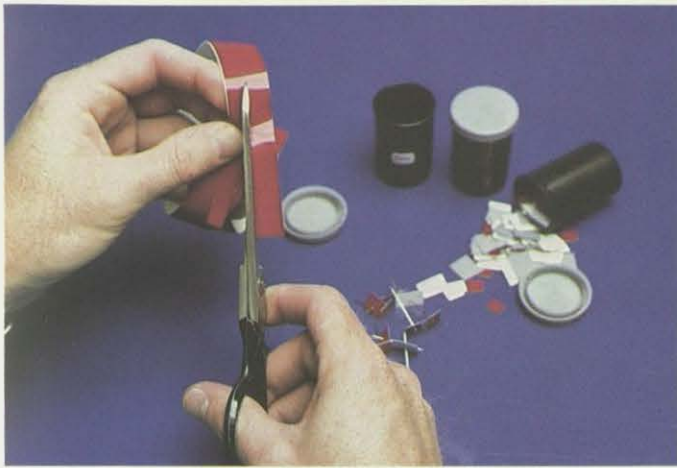
For storing and carrying these handy little trail markers, I use the plastic containers in which 35mm films are packaged. A couple of these will hold enough for most excursions to the woods, and they conveniently fit inside a coat or shirt pocket.

So whenever you plan a trip into back country, take some markers along (in addition to a compass and topographic map of the area) and you will be making your way like a modern-day Daniel Boone. As for me, I'd be lost without 'em! □

Troy Caruthers Sr.'s Trail Blazing Method



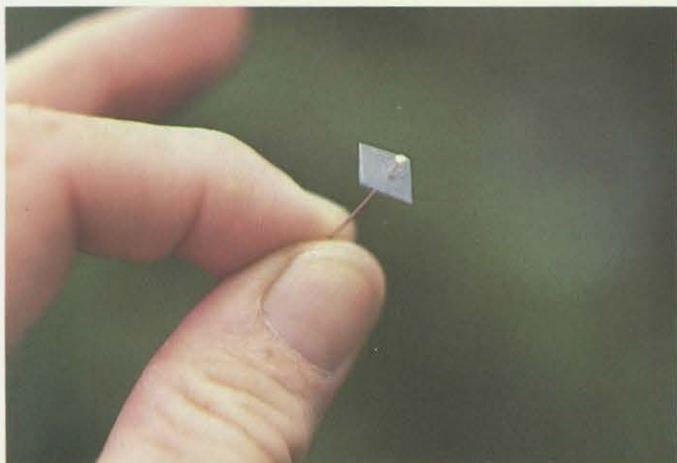
This trail blazing method works day or night, with no damage to the forest's trees. All that is needed is some reflective tape, straight pins, scissors to cut the tape, and a handy container in which to store the finished markers.



If the reflective tape is wider than about $\frac{1}{4}$ ", it can be split in half. The authors find this to be adequate when used as they describe.



After the $\frac{1}{4}$ -inch squares are made, the straight pins are punched through them, and they are ready to use.



The finished markers are small, extremely lightweight and a hundred or so can easily fit into a small container. The authors recommend plastic 35mm film containers as one handy storage means.

Golden Anniversary of 'DING' DARLING'S DREAM



By John Waters Jr.

During 1984, duck hunters, conservationists, wildlife artists and stamp collectors all over America have celebrated the golden anniversary of the federal Migratory Bird Hunting and Conservation Stamp. The 1983-84 "Duck Stamp," as it is popularly known, was the 50th edition. This year's stamp marks the beginning of a second half-century of waterfowl conservation.

Florida's share of the total nationwide sales of federal duck stamps has been \$4,695,832 since 1934. The money was spent to

purchase, in whole or part, 89,290 acres of prime Florida habitat for migratory waterfowl. These land and water areas were bought at an average bargain price of only \$52.59 per acre!

The "Duck Stamp" story officially began March 16, 1934, when the United States Congress passed the Migratory Bird Hunting Stamp Act which President Franklin D. Roosevelt signed into law. This first-of-a-kind law required every hunter age 16 or older to carry a current, signed "Duck Stamp" while hunting ducks, geese or swans.

The Act also provided for the monies collected from stamp sales to be spent directly for the acquisition of waterfowl habitat to conserve North America's valuable migratory birds. More than \$270 million has been collected from the past half century's sale of more than 87 million individual federal duck stamps. These millions of little

engraved works of art have been directly responsible for the purchase of more than 3.5 million acres of habitat for nesting and resting waterfowl all over the United States.

The first federal duck stamp sold for \$1, and the price stayed at that level until 1949 when it was raised to \$2. In 1959, a federal duck stamp cost \$3; then in 1972, it sold for \$5. Since 1979, the price has been \$7.50. Had you purchased one federal duck stamp each year, as a duck stamp collector, you would have invested \$146.50 through the 1983-84 50th issue, but your complete set would have a fair market value today of about \$6,000.

If you had bought the stamps just for their artistic beauty alone, you would own miniature reproductions of original waterfowl art by some of the most talented artists found



1984 federal Migratory Bird Hunting and Conservation Stamp

anywhere. Your miniature gallery would contain flying ducks, swimming ducks and sitting ducks.

Some of the stamps show geese and swans. Most portray adults, but a few also show juveniles. Only one issue, the 1959 stamp, includes animal life other than waterfowl as a principal subject. The stamp that year depicted a black Labrador retriever holding a downed duck—the only portrayal of nonliving waterfowl in the entire set.

The environmental scenes of these miniature prints demonstrate the geographic and physical beauty of America as well as the graceful beauty of feathered wild things. Sky, water, snow, mountains, marshlands, plains and meadows graphically emphasize one major purpose of federal duck stamps—habitat acquisition.

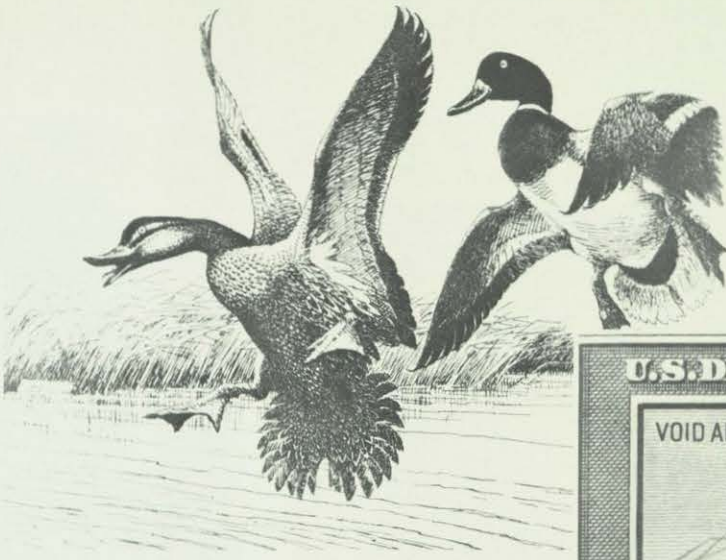
The federal duck stamp idea was the brain child of Jay Norwood "Ding" Darling, a political cartoonist for the *Des Moines (Iowa) Register*. In 1924, he had already won his first Pulitzer Prize for his stinging, satirical, conservation-oriented cartoons. He was destined to win a second Pulitzer Prize in 1943.

Darling's caricatures often concentrated on certain government bureaucrats and showed anthropomorphic wild creatures such as lame ducks traveling the road to extinction or fishes gasping for survival on the drained bottoms of waterways. He became recognized by many newspaper readers across

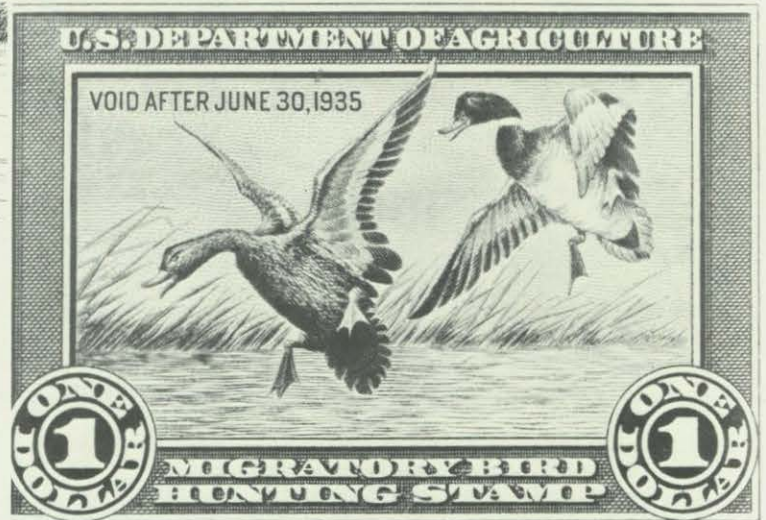
America when his cartoons were syndicated by the *New York Herald Tribune*.

With a dedication to conservation and his gifted senses of satire and humor, Darling also had the good sense to realize that protection of wildlife habitat was vital to the survival of all wild living things. In 1934, he was hand-picked by President Franklin D. Roosevelt to join two other conservation-minded men (one an ecologist, the other an editor) to form a wildlife restoration committee. The committee quickly concluded that \$50 million was needed to save waterfowl through habitat acquisition. Roosevelt then named Darling as head of the U.S. Department of Agriculture's Biological Survey, the forerunner of today's U.S. Fish and Wildlife Service.

Darling proposed his idea for selling the duck stamp as a plan to raise the funds necessary for ▷



"Ding" Darling's dream began to come true with a quick sketch, above, which he submitted as an idea. The Bureau of Engraving then used the sketch to engrave printing plates for the first federal duck stamp. The first issue, at right, proved the feasibility of his idea when 635,000 were sold for \$1 each.



purchasing habitat. When the Act was passed, he designed the first stamp. A well-founded story says he submitted a preliminary sketch of his design, two mallards alighting on water, in a rush to get the idea across. Later, when he inquired about acceptance of the idea, he learned his sketch had already been converted into the first stamp by the Bureau of Engraving. Initially, he was angry. He feared the design would not sell well because it was just a "quick sketch." However, the stamp was a fantastic success and 635,000 were sold that year at \$1 each.

That first \$635,000 proved the feasibility of Darling's fund-raising idea. In 1934, wetlands were selling for as little as 77 cents per acre! By the time Congress passed the Act,

many of the vast marshes of the Great Plains region of the United States had already been destroyed—either by man's deliberate draining, or by nature's devastating droughts of earlier years. Thus, the first few years of the program concentrated on controlling further damage to the country's remaining waterfowl breeding grounds.

E

arly in this greatest-ever wildlife

conservation program, the emphasis was on providing sanctuaries. As the program matured, however, it was realized that sanctuaries alone were not enough. Management of the new refuges was recognized as the need

next most important to habitat acquisition.

Wildlife management takes on many forms, including burning to enhance or control vegetation; winter feeding of nutritious grains such as rye, corn and wheat; and construction of dikes and other man-made means for controlling water levels. Even forestry practices are important, because a number of waterfowl depend on acorns and other forest foods for winter food. Other wild plants found in the wetlands are equally important.

As wetlands outside these federal refuges continued to be altered to become useless habitats in which waterfowl could not survive, the millions of acres of healthy habitat acquired with federal duck stamp dollars, coupled with the dedication



"Ding" Darling won Pulitzer Prizes in 1924 and 1943 for his editorial cartoons. He became widely known when his cartoons were syndicated by the *New York Herald Tribune*.



Jay Norwood "Ding" Darling, father of the federal duck stamp idea. He is shown here at his studio at the *Des Moines (Iowa) Register*, where he worked.

of professional conservationists, became even more lifesaving for many species of North America's migratory waterfowl. Many other wild species also benefited.

For anyone in Florida, it is a relatively short drive to a refuge, and a sure bet to see lots of ducks, especially during December and January. A field guide and binoculars are basic equipment for

an open-air field day you'll never forget. And, if you've ever bought a duck stamp, you can rightly say, "I helped those ducks get here!" □

Most

migratory waterfowl nest in northern states. In Florida, our eight federal duck stamp-funded refuges serve as winter stopover places during their annual migrations. In winter, millions of ducks may spend time in these refuges, as well as in our southern coastal wetlands and bottomland swamps. The sight of thousands of ducks in these refuges is magnificent!

FLORIDA'S NATIONAL WILDLIFE REFUGES WHICH WERE PURCHASED IN PART WITH DUCK STAMP DOLLARS

REFUGE & LOCATION	TOTAL ACRES	DUCK STAMP ACRES
St. Vincent; Apalachicola	12,490	12,358
St. Marks; St. Marks	64,600	31,568
Chassahowitzka; Homosassa	30,436	22,615
Lake Woodruff; DeLeon Springs	18,506	18,419
J.N. "Ding" Darling; Sanibel	5,014	549
Loxahatchee; Boynton Beach	145,635	2,550
Great White Heron; Big Pine Key	7,404	1,236
Pinellas; near Gulfport	394	17



THIRD PLACE, W. W. Loveland, Inverness

FIRST PLACE, reproduced at right and on the front cover, was taken by Michael J. Wilhelm of Miami.
 SECOND PLACE, far right and on the back cover, was taken by Robert W. Repenning of Gainesville.





HONORABLE MENTION, Dana C. Bryan, Tallahassee

After viewing 355 images entered in the nongame wildlife category of the 1984 FLORIDA WILDLIFE Photo Contest, I can truly say that judgment does not come easily. My memory is a blur of colors, feathers and fur, but I think all members of the judging team agree the resulting display was worth their efforts. The winning entries, shown on our covers and these pages, give us a wonderful glimpse into the vast array of nongame wildlife found in Florida.

The striking front cover photograph of a preening American egret won first place. It was submitted by Michael Wilhelm of Miami, a 40-year-old engineer whose interests in wildlife and photography have involved him with the National Audubon Society and the Daguerre Photo Society, of which he is president.

The back cover photograph of a tree frog, which captured second place, was snapped by Robert Repenning, a biologist with the University of Florida. Repenning has been photographing nature for about 16 years, and says the tree frog photograph involved wading knee-deep in ditch water and bidding his time to come away with this image. ▷



HONORABLE MENTION, Stella Carmichael, Sarasota

W. W. Loveland, our third-place winner, is a retired mechanical engineer who moved to central Florida from St. Paul, Minnesota, in 1970. The abundance of natural resources in central Florida provides Loveland with unlimited opportunities for fishing and nature photography.

A common thread which seems to connect the three top finalists, and probably the honorable mentions as well, is demonstration of technical expertise. That leads me into a discussion of several points that came to mind as I was looking through the hundreds of entries in this contest.

In most competitions, the majority of contestants will be eliminated from the running and the judges will focus on an outstanding few. In judging all the entries in this contest, I found that difficulties arose because there wasn't that much difference between the final selections. Allow me to give those of you who may be interested a few tips on what makes the difference in this kind of competition:

Judges need something to pare down hundreds of entries, so all the rules count. First *read*, then *follow* all the rules. ▷



HONORABLE MENTION, Mark J. Barrett, Oklawaha



HONORABLE MENTION, Walter Dawn, Miami

Specifically concerning wildlife photography, you must first concentrate on the basic techniques of photography. The winning entries will most likely be in focus, well lighted, correctly exposed and beautifully composed—or they will break any or all of these rules, *but* in a bold and purposeful manner. Whether the winning image is technically correct or incorrect, it will be spectacular!

Finally, but most importantly, once you have mastered the skills of photography, you must put your brain and imagination to work. The more unusual or impossible the image appears, the more it may stand out in the competition. Don't take pictures you have already seen somewhere else. Others probably saw them too. Strive for something less commonplace to display your ingenuity or knowledge of the subject. This will also draw you further into your subject matter and add to your enjoyment.

Putting all these elements together may be asking a lot, but remember there are many other photographs in competition for the judges' attention. This demands all the skill and imagination you can muster. And one last ingredient I forgot to include...good luck! —John Roberge



HONORABLE MENTION, Wendy Wilson, St. Petersburg

Dove Hunting

A Southern Tradition

By Glen McNeill

Do you know a place we can go shoot doves? What gauge and type of shotgun is recommended? What size shot is best? How do you go about dove shooting? What is the best time of day to hunt? During those preparatory weeks of September, just before the dove season opens, questions like these are hurled by the hundreds at employees of sporting goods and hardware stores.

The majority of these inquisitive, novice dove shooters are about college age, but many are older adults who have recently moved to Florida and just heard about the challenging, exciting sport enjoyed by Florida dove shooters. Quite a few of them have been living in a state along the Canadian border; or in New England, which has no dove season; or in a metropolitan area where dove habitat is too far away. Now, the Florida sport of dove wing



shooting has opened up an entirely new outdoors world to them.

Two necessary ingredients for a successful dove shoot—finding a place where doves are feeding and getting permission to shoot—are both important and difficult to obtain. Far simpler is obtaining the right gun, ammunition, clothing and equipment. Developing into an excellent dove shooter requires time, practice, observation, discussion and possibly some reading. The knowledge that will be of greatest value is dove behavior under certain conditions and on different landscapes. This, of course, is learned only through personal experience, but opinions of seasoned shooters will help.

Before analyzing the basic factors of successful dove shoots, let's first look closer at the quarry—that fascinating, frustrating, swift, elusive game bird that attracts more hunters, sells more shotguns, and has more ammunition fired at it than any other live target. It is the mourning dove, the most widely

distributed species of dove found in each of the 48 contiguous states. It is almost exclusively the species hunted in Florida, although a few white-winged doves migrate here from their natural habitat in the Southwest.

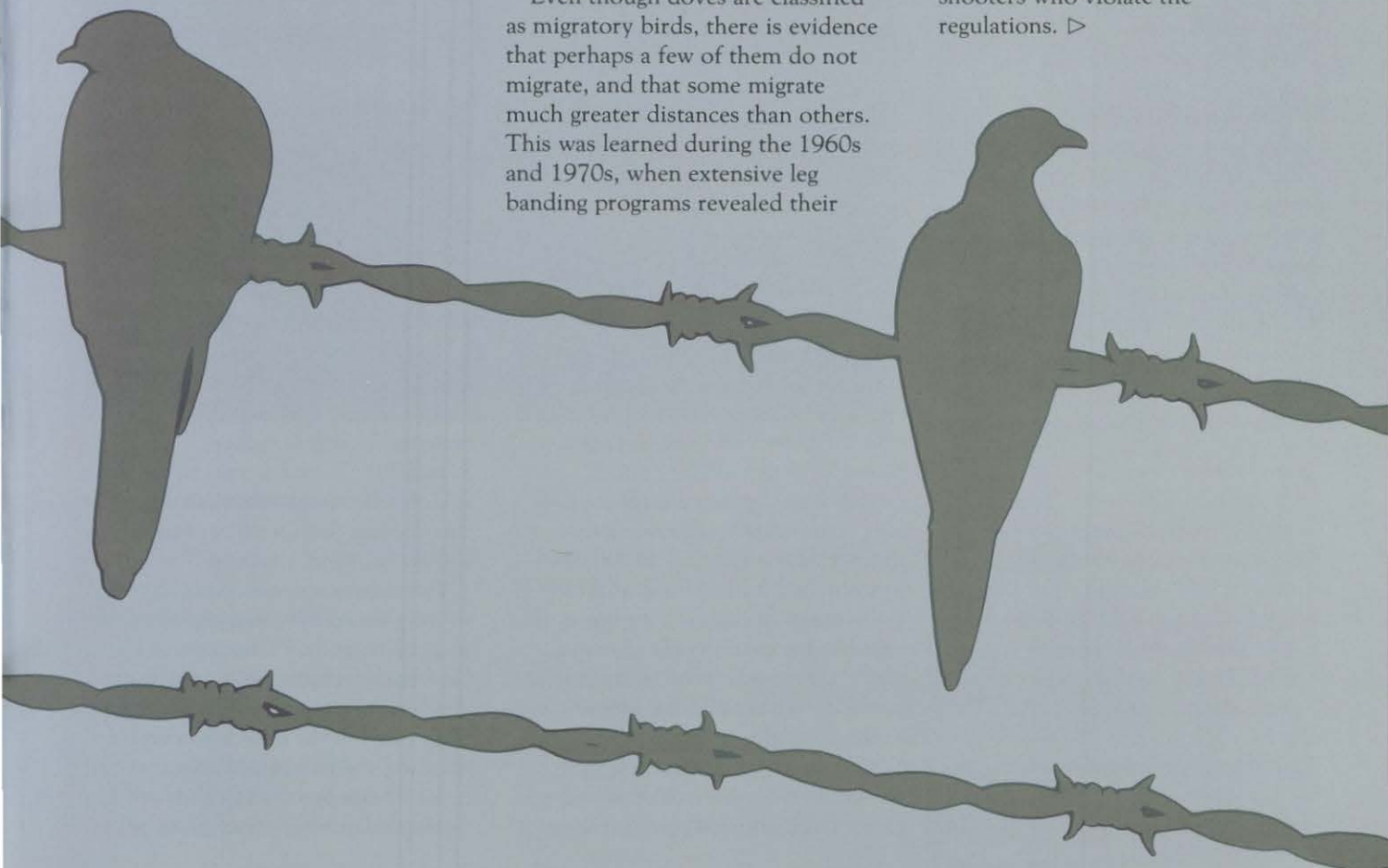
A bit more than 60 years ago, the mourning dove was designated a migratory bird and came under the control of the U.S. Fish and Wildlife Service (USFWS). About 1919, the USFWS began its continuing program of regulating the taking of migratory game, especially such birds as ducks and geese which were then being slaughtered in great numbers for sale to restaurants.

Although doves are primarily hunted for sport (because their relatively small size and speedy flight make them an impractical target for meat hunters), the USFWS began regulating the bag limit and hunting seasons for doves during the 1930s. Since then, the daily bag limit has varied from 35 birds down to a low of 10 for a couple of years in the 1960s, but has remained at 12 per day in Florida in recent years.

Even though doves are classified as migratory birds, there is evidence that perhaps a few of them do not migrate, and that some migrate much greater distances than others. This was learned during the 1960s and 1970s, when extensive leg banding programs revealed their

migration patterns. At the same time, it was learned that the dove migration peak southward into and through Florida occurred in October. That is why the first phase of the hunting season begins early in that month. The banding study also indicated that the fall migration is triggered more by reduced daylight hours than by cold weather.

Because of the expertise of federal control of dove harvesting, in close cooperation with the Commission and conservation departments in other states, the mourning dove population in the Eastern states has remained fairly constant over the past decade. It increased slightly in those states between the Mississippi River and the Rockies, and dramatically expanded west of the Great Continental Divide. It has now been proved that through enforced regulations, an adequate dove population is renewable annually. East of the Mississippi alone, 2.5 million dove shooters hunt this game bird. The greatest present dangers to the dove population are further loss of nesting habitat and a few unethical shooters who violate the regulations. ▷



For years, dove shoots in the Deep South have been mostly social and somewhat clannish, but that once-cherished tradition began to wane when troops returned home after World War II. Where dove shooting had once been a sport almost exclusively enjoyed by white-collar professionals, it soon became popular with blue-collar workers.

Three possible sites in the Central Region include the Ocala Wildlife Management Area, the Tri-City Dove Field near Leesburg and the new Belleview Dove Field between Ocala and Belleview. In both the South and Everglades regions, dove hunting is available on private lands. For information on dove fields in your area, contact the nearest Game

Yet, many dove shooters bought more expensive high brass (3 ¾ drams of powder) shells loaded with No. 9 shot for early-in-the-season shoots and high brass with No. 7 ½ shot for late season. The new demand for high-powered shells is apparently the result of morning shoots, which are characterized by increased timidity and higher flights of doves. Some shooters rack up their guns at the end of the first phase and do not even attempt to shoot doves when morning shooting is allowed.

In the order of importance to getting shots at birds within easy range, camouflage is the most essential. It doesn't mean much to success on an opening day shoot, when the birds are practically tame and most are experiencing their first gunfire. But, thereafter, being concealed and avoiding sudden movement when birds are approaching are critical. Next in importance is elimination of all items which reflect sunlight. Items which can't be covered, such as eyeglasses or glossy gun barrels, must be handled to reduce reflections towards incoming birds. The worst offender is a large, shiny, exposed wrist watch.

How important is a knowledge of dove behavior? Experienced dove shooters think that knowing a dove's normal routine and probable behavior under certain weather conditions are key factors in successful dove shooting. Doves are gregarious creatures and gather into small flocks at the end of their nesting season, but they split off into pairs as early as February in Florida. Here, they may nest as many as five times before September. They lay only two eggs in a clutch, in a poorly-built nest that is often destroyed by high winds.

The mourning dove feeds almost entirely on seeds of grasses, weeds and grains, and on fragments of harvested peanuts. Fields with great appeal to doves are corn fields where part of the crop has been left standing and harvested peanut fields. Doves are skittish about feeding on ground where grass or



Glen McNeill-Photograph

However, it was not until the mid-1960s that farmers began to take part in the shoots. Politicians, businessmen, sawmill owners and bankers began to arrange dove shoots to nourish friendships.

Even today, the best dove shoots generally take place on small, single-family farms, where traditional crops of corn, millet, peanuts or oats are planted and some part of the crops is left in the fields for livestock forage. Although dove hunting is a tradition in Florida, most of the available opportunities are on private fields. There are relatively few areas open for public dove hunting. Those which are open include dove fields planted on the Apalachee Wildlife Management Area near Sneads and the Joe Budd Wildlife Management Area near Tallahassee in the Northwest Region.

In the Northeast Region, dove fields are located on the Camp Blanding Wildlife Management Area and public hunting is available at the DuPont Dove Field north of Starke.

and Fresh Water Fish Commission office listed on page 48.

As can be expected, every dove shooter has his own idea of what gun is best, but the great majority use a 12-gauge, semi-automatic shotgun with its magazine plugged to meet the federal regulation of holding not more than two shells plus one in the chamber. This type of gun is a multi-purpose sports weapon that can serve just as well for waterfowl, squirrels, quail and other game. The most important requirements for a shotgun are that it fit the hunter and not be too heavy for his stature.

The choice ammunition for doves also varies widely, depending on a shooter's early training. Most old-timers relied on 1 ⅛ ounces of No. 7 ½ shot propelled by 3 ¾ drams of powder. However, in the past year, partly for reasons of economy and partly due to availability, more hunters bought shells with only one ounce of No. 8 shot and 3 ¼ drams of powder than any other, according to numerous sporting goods shops.

weeds obstruct their view of potential predators or other dangers. They will almost invariably feed on any available fairly clean ground. Following a rain, they normally feed on higher ground which drains quickly.

Doves are prodigious water drinkers and must also swallow frequent supplies of coarse sand, tiny gravel or shell particles to help with grinding seed hulls. They feed as quickly as possible after leaving their roosts in early morning, but only for a short period of time. They have all day to satisfy their appetite. For about four hours in the middle of the day, doves will take a siesta in tall trees not too far from the field targeted for their main afternoon feed. This last feeding of the day is critical because they need to gorge themselves to support their high metabolism rate through the long night.

Mourning doves will keep

than too many. Some stands are always better than others, and ample space between 250 and 300 feet should be allowed for some shooters to relocate their stands to get closer to dove flights, yet not cut off flights for the lucky shooter who picked a better stand. Doves entering the field midway between two hunters should be just out of range for both, but offer a shot to another hunter in the field. If two shooters are close enough to doubt who kills a bird, they are too close for safety or an enjoyable shoot.

If a shoot has a hunt master or leader, he can either designate the stand location, or let everyone select their own. If a hunter decides to relocate his stand, he should make his movements and new location evident to all adjacent shooters. If any novices are in the group, the leader should caution them not to shoot at doves on their siesta in trees around the field, for once

Some of the traditional rules of dove shooting include the following:

- A wounded dove that requires another shot to keep it from escaping belongs to the hunter who fires the last shot.
- A wounded dove that glides some distance away, falls near another hunter and does not need to be shot for capture should be picked up and returned at the end of the hunt to the original hunter.
- The safety of other hunters and farmers' livestock is paramount.
- Shooting at low-flying doves is extremely dangerous, especially at cripples that suddenly take to the air in low flight.
- A shooter who brings novices on the hunt should keep them nearby for instruction in shooting techniques and safety.
- Never shoot a sitting dove unless it is badly wounded and obviously won't survive.
- Never abandon litter of any kind in a field.
- Always leave all farm gates in the open or closed position, as found.
- Always thank the farmer for letting you shoot on his property, even if you paid him handsomely.
- A dove is never to be wasted and all reasonable efforts should be made to find a fallen bird, but not to the detriment of other shooters.
- After the birds quit flying in late afternoon, another search should be made for lost birds.
- Sportsmanship is the first commandment of dove shooting.

Dove shooting is the finest scattergun sport possible and it brings outdoor happiness to thousands of Florida hunters. Historically, it is a sport of true sportsmen who respect game regulations and the important objective of continued excellent dove shooting for generations to come. No other shooting is quite as compelling, challenging or exciting as an afternoon in quest of those fast-flying, twisting, delicious doves. □



Glen McNeill-Photograph

returning to a good grain field time and time again despite it being hunted. Since the afternoon feeding period will generally last a couple of hours or more, it is the prime time for a traditional dove shoot.

If a dove shoot is on a private farm, the hunt originator usually invites only enough shooters to fit the field. This allows about 250 feet between stands around the perimeter of the feeding area. It is far better to have too few shooters

driven from their "nooning" roost, doves usually wing to other fields for the remainder of the day.

Novice hunters should realize that in the intimate closeness of group shooting on a dove field, everyone's actions affects the enjoyment, safety and success of others. A plummeting dove should be watched until it hits the ground and retrieved with the shortest possible search time to avoid turning other doves away from the field. □



AUTUMN

Text and Photographs
By Bill Weekes



In autumn, the foliage of our deciduous forests prepares for winter, and dying leaves bombard our eyes with colors. Soon to be gone, they make us feel a tinge of remorse at their impending departure.

Reds of oak, maple, blackgum, sourwood, sumac and dogwood are complemented by yellows of beech, hickory, birch, ash, tuliptree, catalpa, elm, locust, boxelder and other maples. Orange, brown, pink, scarlet and purple are with us, then gone.

What causes the colors? Each leaf has a stem, or *petiole*, which connects it to a twig. The petioles are the final passageways through which soluble nutrients flow



into the leaves. These nutrients have been absorbed by the tree's roots and conducted up through its trunk, branches and twigs to reach the petioles.

Throughout each leaf, floating in its cell sap, are tiny capsules or disk-like bodies called *chloroplasts*. They house *chlorophyll*, the green-colored substance necessary for making food (starch) in the process of photosynthesis. Two pigments, along with energy present in the sun's light rays plus the carbon dioxide taken from the air by the leaf, help chlorophyll make food. Both pigments, *xanthophyll* and *carotene*, are present in the leaf's chloroplasts, mixed with the chlorophyll.

Xanthophyll is yellow and carotene is orange, but because they are present in such relatively small ▷





Nutrients flow into the leaf during long summer days. There, they are converted to chlorophyll, giving the leaf its green coloring.



But, as cool weather and shorter days arrive, the leaf stem clogs up. Chlorophyll breaks down, allowing a yellow pigment to come to the fore. Sugars now accumulated in the dying leaf form a red pigment in the liquid of the leaf cell, giving us the final flaming beauty of Autumn.

concentrations, these pigments are easily masked by chlorophyll's dominating green.

With the passing of summer, the days shorten and less available sunlight results in less food making in leaves. And as the nights turn cooler, the dip in temperature arrests chlorophyll production. To shorter days and lower temperatures is added a third natural phenomenon: the shutting off of nutrients to the leaf. With the retardation of the leaf's life processes, a corky layer forms across the base of the petiole, where it joins its twig. When this occurs, chlorophyll begins to disappear, allowing xanthophyll and carotene to dominate. At first, green gives way to yellow, then the leaf's color may become orange and red.

Other color causers include *anthocyanins*, water soluble pigments which are not found in chloroplasts but which accumulate in each leaf's upper cell layer. Anthocyanins, absent from leaves in summer, give them their brilliant cast in autumn. Dissolved in the cell sap, these pigments are responsible for vivid scarlet, crimson and purple colors. These shades occur when the anthocyanins are not successful in completely hiding the carotene pigment or the lingering green of chlorophyll in the lower cell layers. This explains why reds of the sumac and blackgum have such a deep glow. Also, the production of anthocyanin is in part determined by heredity, perhaps explaining why some maples are red and others are yellow.

Knowing what leaf-coloring pigments are involved, one might ask what external forces will best produce the most vivid colors. Just what kind of late-summer, early-fall weather is needed for the most spectacular fall show of color?

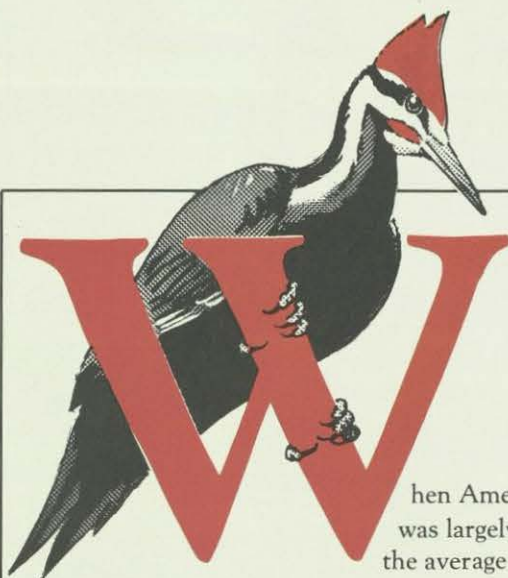
Contrary to common belief, frost in itself does not cause pretty foliage. A sudden frost kills leaves, turning them brown, after which time they fall from the tree. Ideally, for maximum color, leaves should die slowly.

The most colorful fall leaf shows begin with a dry summer. This starts the formation of the corky layer in the petiole which soon stops the flow of nutrients and traps sugar in the leaf. This encourages anthocyanin formation. But to keep the leaves from falling off too soon, rain needs to come in the early fall. The alternation of heavy rain and lavish sunshine also stimulates production of anthocyanins. Low temperatures should arrive gradually to slowly arrest chlorophyll production. Diminishing chlorophyll unmasks the remaining yellow and orange pigments, and an abundance of sugar, sunshine and rain buffs up the brilliance of the anthocyanins.

Depending on your geographic location, and local variations in these weather phenomena, nature's annual fall color show is usually complete by mid-November. After these last living processes, deciduous trees lose their leaves which fall to the forest floor. There, they slowly break down into humus, and the nutrients which fell with them will be recycled, in time, to help the trees grow more leaves, and at some other fall, the process will begin anew. □

PROJECT WILD

Comes to Florida



By John Waters Jr.

The typical young American's knowledge of wildlife has declined from what it was when our grandparents were young.



John Waters Jr.-Photograph

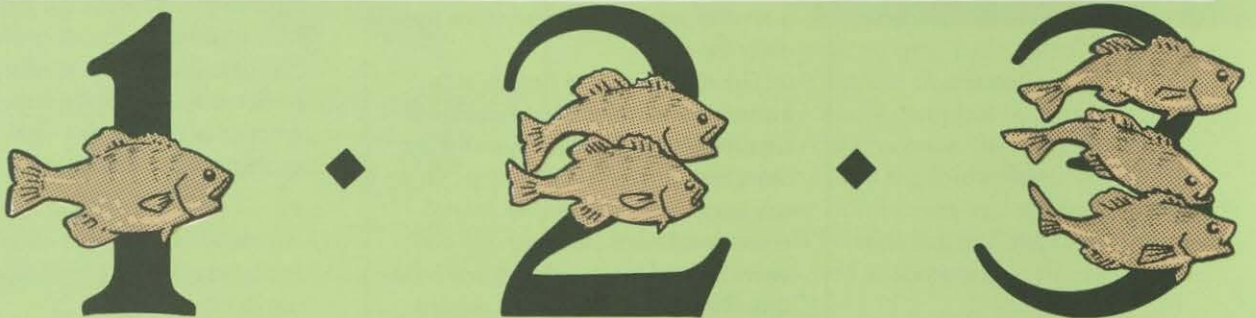
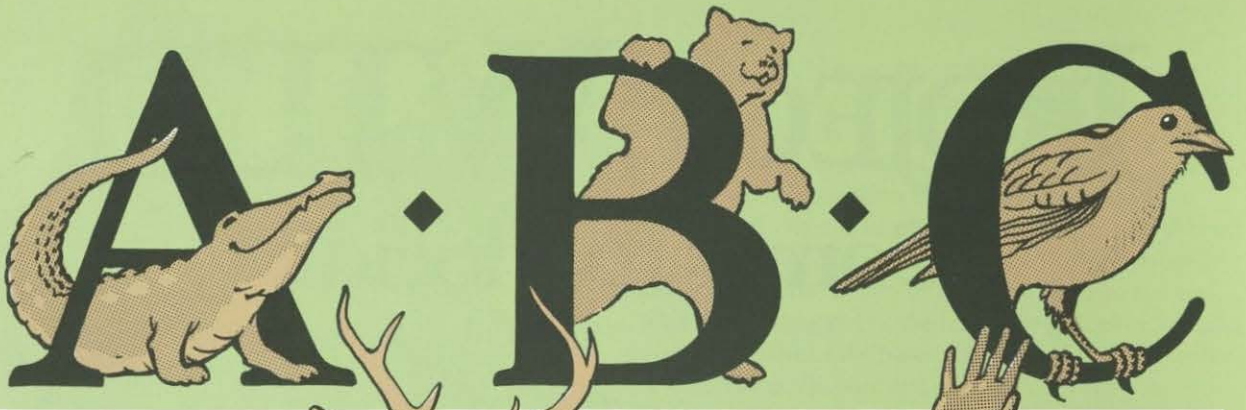
When American society was largely composed of rural families, the average child grew up in a situation where many of the mysteries of the natural world were common knowledge. Boys and girls growing up in rural America during the early 1900s knew from everyday experience such things as how many eggs were usually found in a mockingbird's nest; that the chilling screeches they sometimes heard in the woods at night were not some supernatural monster, but probably were just owls hunting for mice; and that the tiny fawn at the meadow's edge was not an orphan. Its mother was most likely just out browsing or silently hiding nearby.

For turn-of-the-century American youth, summertime and after school hours included encounters with tadpoles, turtles, butterflies and other wildlife, rather than television and electronic games. Hunting and fishing were treasured seasonal activities which involved the whole family and which exposed youngsters to woods, fields and waters and all the myriad of life forms found there. However, for most American children today, these activities are far removed from their daily lives.

The typical young American's knowledge of wildlife has declined significantly from what it was when our grandparents were young. This has been substantiated by several recent studies of children and their attitudes and knowledge about wildlife. One of these studies, commis-

sioned by the U.S. Fish and Wildlife Service, revealed a real need for something to be done to increase awareness and appreciation of wild living things and the environments in which they live. Among the findings of that study were these:

- Children who reported learning about animals in schools and from visiting zoos actually had very limited knowledge of animals.
- Although schools teach biology, the emphasis for most of them is on the cellular aspects of biology rather than a unified concept of wildlife as part of the total ecology.
- Present school learning activities which do concentrate on animal life appear to have little lasting impact on students. ▽



—Children appear to be divorced from direct encounters with animals in their natural habitats, particularly in relation to basic ecological processes.

The study's authors also said they found "a pathetically small amount of attention being directed toward the broad wildlife education needs of children by most federal and state agencies."

Both the Game and Fresh Water Fish Commission and Florida's Department of Education (DOE) are actively doing something to reverse this trend. Both agencies have joined a cooperative program to bring awareness, understanding and appreciation of wildlife and ecology back to Florida's schools, and to other groups who want to know more about wildlife and conservation.

Known as Project WILD, this innovative educational program first began in 1978 as a proposal by the Western Association of Fish and Wildlife Agencies. In 1980, that association joined forces with the Western Regional Environmental Education Council to develop and implement a workable plan to increase conservation education planning, organize teaching materials and train teachers (and others) in how to educate our people about wildlife and ecology. From this beginning, Project WILD has grown to become a major activity throughout America.

Last year, Florida joined 26 other states and two Canadian provinces in bringing the program into the state elementary and secondary school system.

DOE's Project WILD coordinator, Jim Phillips, says, "Educators have a responsibility for helping Florida's schoolchildren understand wildlife and the environment, and Project WILD is helping us accomplish that responsibility in Florida."

They teach practical methods for applying the knowledge science has provided about wildlife and ecology.



Woody Darden, the Commission's coordinator for Project WILD, says, "Traditionally, the Commission has relied on wildlife management, research, regulations and law enforcement to protect our wildlife resources. Almost no comprehensive wildlife education programs were in use before Project WILD."

Both Phillips and Darden are excited about Project WILD. Over the past year, they have been active in coordinating and conducting Project WILD workshops for Florida's schoolteachers. Some workshops have been at the local level, principally for teachers in a single county; others have been held on a general state level at the Commission's youth camps near Ocala and West Palm Beach. The workshops have been enthusiastically praised by teachers who attended.

A typical workshop includes familiarizing teachers with the pro-

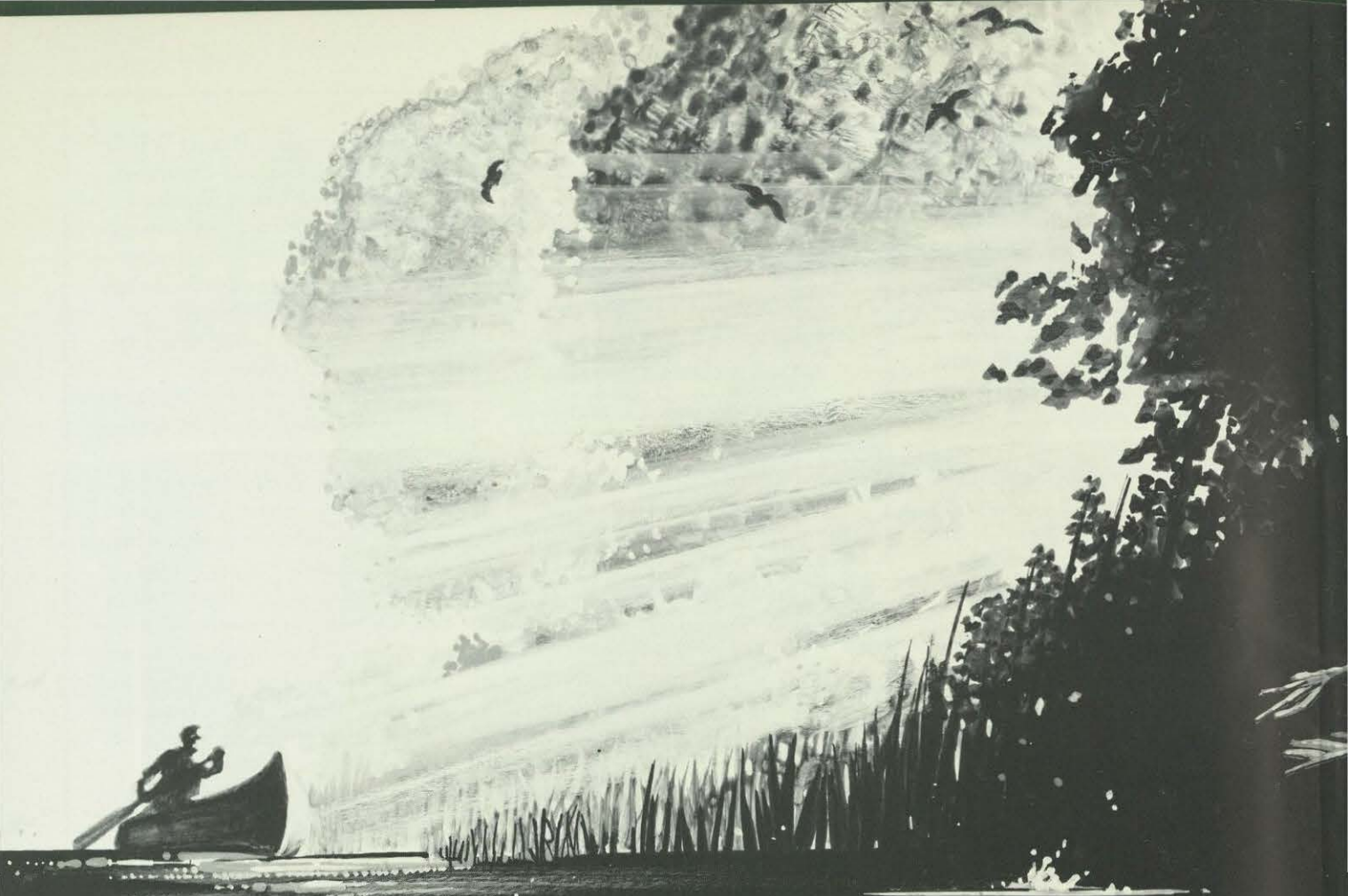
fessionally prepared Project WILD workbooks. These well-illustrated, expertly written, practical guides have been organized to make it easier for teachers to include lessons and activities about wildlife ecology in their curriculums. Project WILD's concept is interdisciplinary in approach and action.

Commission and DOE staff work with professional educators at these workshops to demonstrate how learning about wildlife can be fun, as well as educational. They teach practical methods for applying the knowledge science has provided about wildlife and ecology. Phillips says this technique is especially useful. "We can't assimilate all the students in Florida," he says, "but we can reach the teachers. In turn, they will take conservation to the classrooms."

It is in Florida's school classrooms that Project WILD's planned programs have already been put to use. Here, teachers can do the needed job of educating students about the facts of conservation, ecology and how the human population and the world of living things interact and coexist.

It is in the world outside the classroom where these important teachings will have the greatest impact. As Project WILD continues to grow in Florida, our children will have a significantly better chance of rediscovering the natural world of wildlife their forebearers knew and appreciated. □

Editor's Note: To find out more about Project WILD, or to arrange a workshop for your local county schools, contact Jim Phillips, Environmental Education, Florida Department of Education, Knott Building, Tallahassee, FL 32301, or Woody Darden, Game and Fresh Water Fish Commission, 620 South Meridian, Tallahassee, FL 32301.



Gliding at Dawn on Knighting Lake

By Bill Boe

Night fades gently off Knighting Lake in Gilchrist County near Trenton, unveiling a collage of color and life. As a canoe bearing visitors slices its way through the lily pads and hyacinths, indignant voices from the underbrush protest this invasion of privacy and alert wild neighbors to the intruders' presence.

First to squawk its disapproval is a great blue heron, as it wings upward from a cypress stump to inspect the uninvited guests. Slowly, the big bird circles the perimeter of the lake and seeks new solitude, while constantly chastising the canoe below. Satisfied with the safety of distance, the tall wading bird then extends its legs and lands in the shallow water on the opposite shoreline to spear a breakfast of minnows, crawfish and frogs.

As the canoe navigates into a maze of shoreline cypress, resident red-winged blackbirds warble insults from their nests at the bases of stumps or in the crotches of low limbs. As the canoe nears, they reluctantly desert their woven homes and nervously dive from branch to branch, afraid for their unborn, but unwilling to attack the strangers in their midst. Once the canoe passes, the black birds dart to their nests to inspect their aqua-speckled eggs and to glare at the trespassers as they disappear into the trees.

Unwilling to vacate his bed, a brown water snake relies on camouflage to protect his privacy as the canoe approaches the water-level underbrush he claims as home. Only the nod of a head and an intent stare



indicate the reptile is not an extension of the twisted roots and rotting leaves.

As the morning sun's rays of warmth and light filter through the encircling oak and cypress, sounds from the sky alert the visitors that birds from nearby rookeries are now airborne and seeking an early breakfast. Within seconds, a flock of white ibises glides between the tops of two cypress trees and begins a low level patrol of the shoreline, searching the shallow water for vegetation which harbors snails, freshwater shrimp or crayfish. They quickly drop into a marshy opening in the wood line and begin probing methodically for tasteful surprises with their curved bills.

Near a bend in the shoreline, the visitors observe two dark bumps on the still surface. As the canoe nears, the bumps drop into the watery darkness, only to appear again along the shoreline. Silently, the low curl of a grayish tail ripples the surface. Then, with a slight wave, the two bumps are quietly propelled towards some lily pads. The alligator is too cautious to allow close inspection. Its snout nudges a path through the flat lily pads, and it is soon absorbed by the vegetation.

The canoe passes through a narrow neck in the lake that separates open water from marshland. Scattered throughout the marsh are islands of willow, buttonbush, and pickerelweed. Here, boat-tailed grackles flop within the willows, and green herons glare from low limbs, unimpressed by the visitors. Between the willow stands, purple gallinules race across hyacinths on their chicken-like feet, occasionally pausing to peck into the foliage or water. And only upon close inspection can the extended neck of an American bittern be

distinguished from the blades of marsh grass as the wily bird spears a meal of low-flying dragonflies.

Always wary of strangers, a great egret pauses from dining on bream to study the canoe. Dissatisfied with the aliens, the egret extends its snowy wings into flight and seeks a new breakfast table on the opposite side of the marsh. Locating an opening in the duck lettuce, the bird stretches its wings, extends its toes and delicately glides into its new sanctuary. An intent glance at the water, a dart of the head, and an impaled shad reflects the sunlight before forever disappearing into an elevated throat.

It is a typical morning on the big marshy lake, a morning that blends the high-pitched shrills of ospreys with the dull squawks of coots, and the silent dignity of the great egret with the arrogant irritability of the grackles. It is a morning that offers adventures of new life and sudden, brutal death to diverse forms of life both above and below the black water. Throughout north Florida, on hundreds of small ponds, marshes and lakes, this odyssey of life unfolds daily with the increasing morning heat. There is nothing unique about this day, yet it offers a panorama of beauty and excitement—and the spectacle is available daily to those who take the time to seek it.

The canoe finishes its circle of the marsh and returns to the small landing. For the canoeists, it was a morning well spent in an environment that offers inexpensive entertainment and education, an environment created by nature, and in this case preserved by man for the benefit of both. □

Return to Duck Hunting

By John M. Dean

It had been a while since he last hunted ducks on a Florida pond.

"Here come two," Len whispered, pointing to the west. "I'll take the one on the left and you take the one on the right," he said, just as I saw the two small forms headed our way, silhouetted against the early morning sky.

We waited excitedly, guns ready, as the pair of blue-winged teals began to descend, heading directly for our decoys. When they were almost over the middle of the spread, Len and I fired a fraction of a second apart. Out of the corner of my eye, I saw Len's bird splash into the decoys. My bird, completely untouched by two charges of high brass sixes, headed out of the county as I ejected the empties in disgust.



"Relax," Len said, sensing my feeling of the moment. "It's been five years since you've hunted ducks and they're hard to hit even for the guys who shoot at them every year." That made me feel a little better, but I still felt that I should have had that one.

Len is Lenwood Hollister Jr. of Lakeland, my first cousin and a close friend. This hunt was a reunion of sorts for us since it was our first outing together in more than two years. We were hunting at a pond which was part of a group of ponds located not 10 miles from the city limits of a large central Florida metropolis.

Ron McClelland, also of Lakeland and our host on this hunt, had invited us to partake of some of the

excellent duck hunting in this particular area. When Ron called me at my Plant City home with the invitation, I called Len and we accepted his invitation with enthusiasm and expectancy.

Even the scouting trip into the area the week prior to our hunt had been exciting. We had seen literally hundreds of ducks including Florida mallards, pintails and widgeons, but ring-necks and blue-winged teals were in greatest abundance. The purpose of our scouting trip was to select the specific pond in which we wanted to hunt. There were many small, relatively shallow ponds in the area which were completely surrounded by thick cattails. Had these ponds been the only ones ▷



available, we most assuredly would have selected one, but we wanted to stay away from the thickly vegetated ones if we could for several reasons.

First of all, experience in past years had taught us that a duck downed in thick vegetation is extremely difficult to locate. Secondly, we knew it wouldn't be easy to maneuver even a small boat in and out of those walls of cattails. Thirdly, we wanted to be able to see the ducks coming to our decoys from a distance, and not have them in view for only a few fleeting seconds. I had been in these "pothole" type of blinds before, and I knew how frustrating it was not to be able to see the birds until they were right overhead. I wanted to avoid this type of situation.

The pond that we finally selected was a duck hunter's dream. It was about 400 yards long and 100 yards wide (lying lengthwise in a north-south direction), with hydrilla covering much of the surface except for the very middle. The banks were not steep and rocky, but were grassy and gently sloped. The patches of cattails which decorated the edges were perfectly positioned so as to make excellent natural blinds, allowing us to see for hundreds of yards in several directions. We selected two blind locations, one on the south end for Len and me; the other on a point midway down the east side for Ron.

When we arrived on the morning of the hunt, Len and I immediately launched our boat and began setting out decoys. After carefully placing half the decoys around Ron's blind, we quietly paddled down to our preselected clump of cattails. When we finished setting out the decoys, all well within 35 yards of where we would be hiding, Len and I hid the boat and sat down to relax and wait for the legal shooting hour.

We sat in the dissipating darkness and talked about how we had both changed since we had last hunted together. We had matured in many ways, but especially in our views of hunting and fishing. We had come to realize that the enjoyment and

appreciation of the experience were of primary importance, not the size or numbers of the fish or game we brought home. As we watched the morning sun begin to brighten the eastern sky and gently illuminate the world around us, we felt very fortunate to be there. It was a beautiful sight and we were privileged to be a part of it.

Just after legal shooting time, we were taken by surprise when a flock of five ring-necks zoomed in from behind us, buzzed our decoys then streaked toward Ron's blind. In a few seconds, we heard the "boom-boom" of Ron's 12-gauge double as he abruptly interrupted the serenity of the morning with the first shots of the day. Within a minute after Ron fired, I spotted a single headed our way.

"There's one," I said excitedly, as we eased our guns up. The long ring-necked drake veered to my side of the blind as he sailed in. I proceeded to completely miss with the first barrel but killed him cleanly with the second barrel.

"That's the way it's done," Len said, grinning as I dropped two more bright yellow shells into the chambers of my Ruger 20-gauge over-under. During the next hour, all three of us enjoyed some of the best duck shooting anyone could wish for. Small flocks of blue-winged teals and ring-necks were continually fooled by our decoy spread. Len made three perfect one-shot kills in a row with his improved-cylinder Remington 1100 12-gauge, and I began folding birds regularly with the 20-gauge.

We had selected our pond and blind with care. We had also placed our decoys close enough so that we could let the birds come within easy range before we shot. These precautions made our hunt enjoyable and greatly reduced the possibility of crippling and losing birds.

Just over an hour after Ron fired the morning's first shots, we all had our point-system limits, a mixed bag of ring-necks and teals. Our hunting trip for ducks has been a success in every respect. □



Cleaning the Old Charcoal Burner

By Dick Dale

An old-time method that still cleans a muzzleloader's bore.



Cleaning the old charcoal burner isn't much fun, but somebody has to do it! If you want to bypass a lot of messing around with things and stuff, there's an easy way out. Actually, this method has been field tested longer than any other. It apparently worked a century ago, and it works now.

I figured the best authority on cleaning a muzzleloader would be someone who had to get the old shootin' iron clean fast for the next round—like the early guys in buckskin or the lads in blue and gray. When your continued health depends on something, you learn to do it right!

The War Museum was nice enough to send me a musket manual dated back before the Civil War, about 1836 or so. What the manual called for was to plug the "nipple" (muzzle) with a whittled stick (a match, maybe) and make another plug for the business end of the barrel. First you plug the hammer end, then you pour "a gill of boiling water" into the bore, stick the second plug into the muzzle and shake the heck out of it. Lots of shaking!

After the water is poured out, several patches are used until one of them comes out clean and dry. And one will, believe it or not!

Now the *gill* of water, which is about four fluid ounces, is just about right for the .50-caliber, long gun. You'll have to guess how much will do the job with other bores. There has to be an air space so all that shaking around can take place.

The heat in the water does two things; it dissolves all that black gook out of there in a hurry and it makes the barrel dry out almost as fast. It might raise blisters on your paws too, so take care.

You could set the barrel out in the Florida sun for a time just to make sure it dries, and I won't quibble if you use a patch or two soaked in a little modern gun oil as a finishing touch. There isn't a simpler system anywhere. □

It's The Law

By Dave Swindell



I recently read an article in another outdoor magazine which described the use of free-floating jugs for fishing. Can I fish in Florida by this method?

No. The taking of any freshwater fish in Florida's fresh waters by the use of "free-floating unattached devices" is prohibited. The earliest fishing methods law, passed in 1929, did not legalize either trotlines or floating jugs for fishing. However, the law was amended in 1945 to legalize the use of trotlines for taking nongame fish in certain waters. Both Florida Statutes and the Wildlife Code have continued to prohibit the use of free-floating devices for fishing.

The early reasons for this prohibition have been lost in time, but there are valid reasons why this method is undesirable today. When any unattached fishing device is used, there is the risk of loss or abandonment by the angler. In many places, such floats and hooks would constitute an ever-present hazard to swimmers, boaters and fishermen. These devices also are unwelcome additions to litter already in our heavily used lakes and streams.

Under the language of the Commission's present rule, the use of a jug would be permitted if it were attached to the bank or shore, but no game fish may be taken from such a device. Of course, you may use a jug on your fishing line, like a big cork, if you wish.

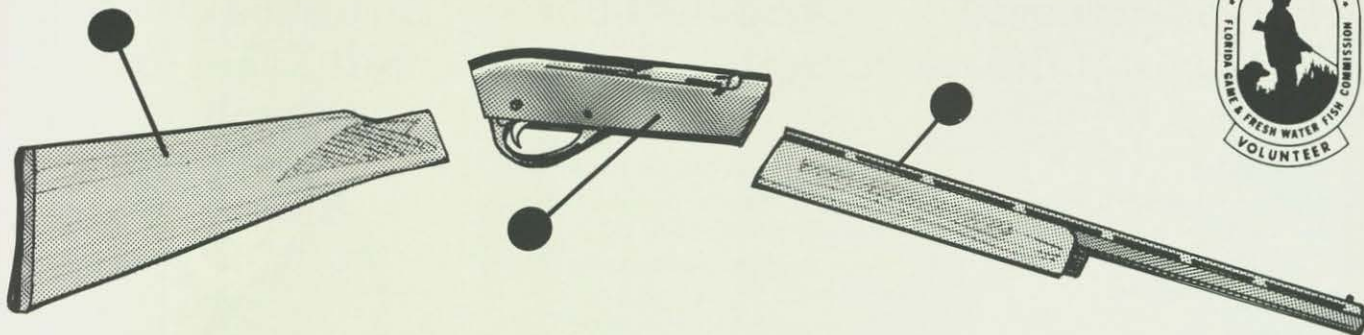
I have some ideas for improving hunting regulations. To whom do I send them?

In the management of Florida's wildlife and freshwater fish, regulations are necessary to prevent overharvest and to equitably distribute the permissible harvest among all the state's sportsmen. In its effort to accomplish this goal, the Commission solicits and welcomes input from all interested persons.

If you wish to offer a suggestion, for either hunting or fishing, you may address it to: It's the Law, c/o FLORIDA WILDLIFE, 620 South Meridian Street, Tallahassee, FL 32301. Although it may not be possible to answer your letter individually, due to the volume of suggestions we receive, you may be assured that all suggestions will be carefully considered. □

Hunter Education News

By Lt. Byron Stalvey
Hunter Education Officer



Do you know your gun? That may sound like a silly question, but you might be surprised how little some gun owners actually know about the basic functions and operation of their guns. One of the most important lessons of the Commission's hunter education course is firearms nomenclature. A gun owner can't fully understand the operation of his gun until he learns these basics. A safe hunter must know that various guns have structural differences and he must learn those differences.

For example, a shotgun loaded with birdshot is unlikely to cause serious harm at long range, say 400 yards or more from the muzzle, but a rifle—even a .22-caliber—is capable of wounding or killing a person 400 yards or farther away. Still, a shotgun can be just as dangerous as a rifle. Most firearm accidents occur at short ranges where a shotgun can sometimes cause more damage than a rifle. Every gun is dangerous at any range—even a BB gun, so treat all guns with care and respect.

New hunters should know that while rifles and shotguns are similar in some respects, there are some significant differences in their barrels. Shotguns have thin-walled barrels, when compared to rifles. Also, the barrel's inside, called the *bore*, differs between these two gun types. The inside of the shotgun barrel is smooth; hence, the term *smoothbore*. Rifle barrels are thicker, and have a spiral groove cut into the bore. This groove is *rifling*. The rifling causes the bullet to spin as it moves down the bore, which makes the bullet fly farther and straighter.

There are three basic components in all guns: stock, action and barrel. The action contains all the parts that load, fire and eject cartridges. Familiarity with how various gun actions operate can go a long way toward preventing accidents. There are five basic action types: hinge or break, bolt, pump, lever and semi-automatic. Guns can be referred to by their action types. For example, *bolt action* rifles or *pump action* shotguns.

Handguns are basically short-barreled rifles. Common handgun actions are break, semi-automatic, single and double. Handguns, sometimes called pistols, are designed to be held and fired in one hand instead of

being braced against the shoulder like rifles and shotguns.

New shooters should become familiar with the different types of gun safeties and how they work. Safeties will be where you can reach them easily on most guns. Although a safety is designed to prevent a gun from firing, you should NEVER depend on it. Safeties can wear out and they may fail to work.

To develop good marksmanship skills, shooters should become familiar with the three different types of sights—open, peep, and telescopic—and their variations. Shotguns have a simple front bead sight and no rear sight. This is because shotguns are *pointed* rather than *aimed* like rifles.

There are also several types of magazines with which you should become familiar. The magazine holds ammunition and is part of the action component. There are tubular, box, clip, cylinder and drum magazines.

Rifles and handguns are sized by *caliber*, such as .22, .308 and .45. Caliber is the measured distance of the inside of the bore and is usually given in hundredths of an inch. For example, a .22-caliber measures 22/100 of an inch in bore diameter.

Most shotguns are sized by *gauge*. Gauge is determined by the number of lead balls, the same diameter as the bore, that it takes to weigh one pound. Twelve lead balls the diameter of a 12-gauge shotgun bore weigh one pound. Shotgun gauges in common use today are 10, 12, 16, 20 and 28. One shotgun is different—the .410—which is measured in caliber size. If it were sized by gauge, it would be about 67-gauge.

Most shotguns have a slight constriction near the muzzle end of the barrel, called a *choke*. This constriction controls the spread of shot as it leaves the muzzle. The most common chokes are *full*, *modified*, *improved cylinder* and *cylinder*. Each one spreads the shot group differently.

A good way to learn more about guns and how they work is to take the free hunter education course offered by the Commission. To find out more about the next course to be offered in your area, contact your nearest Commission office. The toll-free number is usually printed in the front of your telephone directory. □

Conservation Scene

Compiled by Trisha Spillan

Holway Honored As Florida's Best

Sgt. Don Holway, a wildlife inspector in Dade County, has been selected as Florida's Outstanding Wildlife Officer for 1984. He will represent the state this fall at the annual conference of the Southeastern Association of Fish and Wildlife Agencies in New Orleans.

Sgt. Holway was selected for the honor because of his perseverance, dedication and exemplary work. He "exemplifies the characteristics, attitudes and appearance of a wildlife officer and inspector," said Lt. Colonel Brantley Goodson, director of the Division of Law Enforcement.



Holway began his career with the Commission in 1975 as a wildlife officer in Dade County. During his early years, he was involved in the apprehension and conviction of a rapist, numerous drug arrests, and the successful rescue of a missing juvenile who had been lost in the Everglades.

He became a wildlife inspector in 1980 and, by 1983, Holway had been responsible for the apprehension of a large-scale toxic waste dumping operation in Dade County. His innate curiosity has led to many arrests for such violations as illegal importation of restricted fish, illegal trapping and selling of songbirds and recovery of stolen vehicles. □

Check Off For Nongame Wildlife

Residents will have a chance to contribute to nongame wildlife conservation when they renew their vehicle registrations beginning this fall. On October 1, 1984, an individual can voluntarily add \$1 to the price for a license tag and the money will be donated to Florida's Nongame Wildlife Trust Fund.



ONE DOLLAR

Revenues from these contributions will be used exclusively for nongame wildlife research, conservation and education. The Game and Fresh Water Fish Commission will administer the fund. This checkoff is just one feature of the Nongame Wildlife Act passed by the 1984 Legislature. □

Restoring the Kissimmee River

With the planting of a cypress tree on the banks of the Kissimmee River, Governor Bob Graham officially kicked off a test project which is designated to evaluate potential restoration measures in a section of that river. The Kissimmee River Investigations Section of the Commission's Office of Environmental Services will closely monitor the progress of the project, along with other phases of the restoration work. □

Drunken Boaters Bill Takes Effect October 1



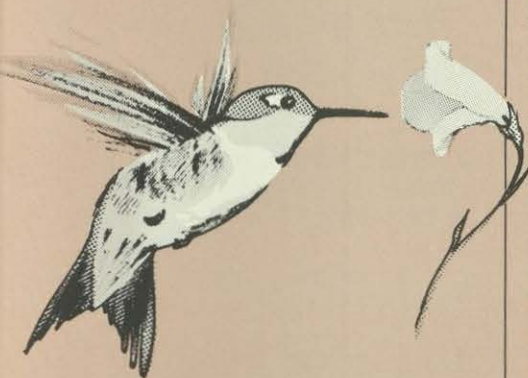
Beginning October 1, 1984, wildlife officers for the Game and Fresh Water Fish Commission will have one more tool to help keep Florida's inland waterways safe. That is the effective date of the new "drunken boaters" bill passed by the 1984 Florida Legislature.

Under the new law, it is illegal to operate a boat while intoxicated or under the influence of alcohol or drugs. Fines for convictions of this offense are comparable to those for driving under the influence, with the first conviction bringing a possible fine of between \$250 and \$500 and a six-month jail term.

A second conviction could warrant a fine of between \$500 and \$1,000 and a nine-month jail term. A third conviction carries a possible fine of \$1,000 to \$2,000 and jail term of 12 months. Conviction also requires mandatory public service or community work project hours and possible substance-abuse treatment. In addition, if a fatal accident occurs while the operator of a boat is under the influence, he can now be charged with manslaughter. □

The July-August 1984 FLORIDA WILDLIFE incorrectly gave the year of the U.S. Congress responsible for the building of the Bellamy Road as 1924. The correct date is 1824. □

Red Fence Insulators Kill Hummingbirds



The tiny bird is zooming across the pasture, heading in a straight line towards some destination, with a single-mindedness that is characteristic of most wildlife. A row of small, evenly-spaced, bright red objects catches his color-sensitive eye. He banks abruptly, attracted instinctively to red and, a moment later, he perches on a strand of fence wire attached to one of them.

He cocks his pea-sized head to one side, then inserts his ridiculously long bill into an inviting hole in the red object. A second later he is dead. Red-colored electric fence insulators have killed another hummingbird.

That's the scenario described by the Arkansas Game and Fish Commission as it warned that state's residents of the dangers of a common device which is now killing hundreds of hummingbirds across the country. Hummingbirds are often attracted to bright red fence insulators. When they insert their bills into the holes in the insulator, perhaps mistaking them for flowers, the current electrocutes them.

In Florida, there have been no studies to date on this phenomenon, but biologists here concur with those in Arkansas, Missouri and other states in recommending that people replace red fence insulators with brown or black ones, or paint red insulators with dark colors. □

Roving Bass Along the St. Johns River

St. Johns River anglers might discover something different about the bass they catch there. Biologists from the Division of Fisheries have tagged and released 207 striped bass and 203 sunshine bass into that river to study angler exploitation and fish movement.

The project has been under way since last December and, to date, 19 tagged stripers and 27 tagged sunshines have been returned by anglers. Two fish caught in late June had moved more than 100 miles from their March release sites. □

Florida Wildlife Places Second

FLORIDA WILDLIFE was awarded second place in general excellence in the 1984 Florida Magazine Association's (FMA) 28th annual contest, in a category for associational and institutional magazines having more than 20,000 circulation and no advertising. The September 15th award followed judging by recognized experts who considered the magazine's overall design and editorial content. This was FMA's "most competitive contest ever," chairman Dan Denton said. □

National Birds of Prey Week Is October 7—13

Florida birdwatchers will have the opportunity in October to witness the annual fall migration of birds of prey, along with other species which fly south for the winter. To increase awareness of North America's raptors, which number 53 species, October 7—13 has been designated "National Birds of Prey Conservation Week" by a bill the President signed into law on July 8. □

New Duck Stamp Contest Rules

This is the time of year when many wildlife artists begin querying the Commission about the annual Florida duck stamp contest; however, there have been some changes in the previous procedure.

Under new rules adopted by the Commission earlier this year, there will no longer be an open contest with individual artists submitting possible designs. Instead, artists and art galleries may submit to the Commission package proposals based not only on the stamp design but also including sale of prints of the design. Revenue from print sales will go to Florida's waterfowl management program. Information on the new duck stamp procedure is available from the Commission's Division of Wildlife in the Tallahassee office. □

Panther Prints Still Available

There are still valuable prints available of our July-August issue's cover illustration, showing Gregg Murray's outstanding scratchboard rendition of the beautiful rare and endangered Florida panther. The full color special prints measure 17" x 25" overall, with the image sized at 16½" x 11¼".

To obtain one of those valuable prints, all you need to do is send \$21 plus the names and addresses of three new one-year subscribers. It's that simple—buy three gift subscriptions for your friends, and we'll give you the print. Mail to FLORIDA WILDLIFE, Panther Print Offer, 620 South Meridian, Tallahassee, FL 32301. Remember to write legibly and include your name and address so we can mail your print to you. □

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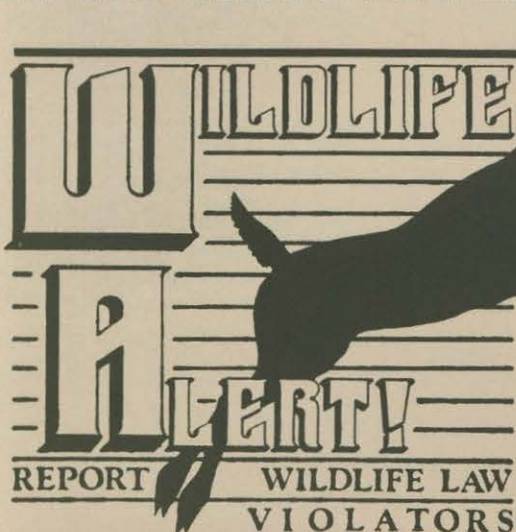
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Floridana

As this year's archery season opens in Florida, many hunters will grab their bows and arrows and head for the woods and fields in search for game. Some of these bow hunters undoubtedly will be thinking about the "primitive" aspects of their weapons, in addition to the skilled sportsmanship the bow and arrow requires for success in hunting.

Actually, the bow and arrow is a relatively modern development in man's hunting weapons. Some archaeologists say it has only been known on this continent for a couple of thousand years. The atlatl, or spear thrower, is significantly older than the bow and arrow—dating perhaps to 10,000 years ago or earlier.

The atlatl and a tennis racket have an important physical characteristic in common. Both of them effectively lengthen the human arm as it moves through an arc. With the tennis racket,

the ball is hit with greater force and therefore rebounds with greater velocity than the hand alone could provide. The atlatl works the same way to add velocity to a thrown spear.

With greater velocity, the hunting spears of early Floridians were better able to bring game down. This was a distinct advantage to these early inhabitants who depended entirely on hunting and gathering to feed themselves. Some of the world's less-modernized hunters still use the atlatl to throw their four- to five-foot-long spears today.

Many of the projectile points found throughout Florida were actually used on spears, rather than arrows. This is true for many of the finest "arrowheads" collected here.

The basic materials for building atlatls in early prehistoric Florida were wood

and antler, or sometimes bone. A common length was somewhere between one and two feet. It had a hook at the end where it fitted snugly in a matching notch at the butt end of the spear shaft. Some atlatls may have had weights attached to them to add even greater velocity to the throwing arc.

The spears also varied in design and length. Probably, there were both fletched and unfletched types and, as a result, they had to be balanced by using different sizes of points.

Compared to spears that could only be used by direct gripping and throwing, or by holding and driving their points into game by hand, the atlatl was a distinct modernization of a more primitive weapon. — John Waters Jr.

